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ANNUAL ADMINISTRATION REPORT

OF

THE FOREST DEPARTMENT,

MADRAS PRESIDENCY,

FOR THE

OFFICIAL YEAR

1881-82.

MADRAS:
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ANNUAL REPORT

OF THE

FOREST DEPARTMENT, MADRAS PRESIDENCY.

FOR 1881-82.

READ—the following Proceedings of the Board of Revenue, dated 5th October 1882, No. 2437 :—

Read—the following letter from Major J. C. WALKER, Conservator of Forests, to the Secretary to Government, Revenue Department (through the Board of Revenue), dated Madras, 25th September 1882, No. 1117-C :—

I have the honor to submit the Annual Report on the Administration of Forests in this Presidency for 1881-82.

2. SECTION I—*Inspection Tours.*—During April and May the Conservator inspected the Chinchona and Australian plantations on the Nílgiris, in the month of June visited the Nilambúr teak plantations and the timber depôts at Calicut. In July he held an inspection of the Central Office in Madras and of the Anaimalai Forests, Coimbatore District. During the months of August and September he made tours in the Madura and Tinnevelly Districts. From the 8th to 24th September he was employed on special duty in Ceylon inspecting chinchona plantations, and on his return again visited the Tinnevelly Division.

During October and November he spent three weeks in inspection of the Trichinopoly plantations and reserves, and on the 15th of November, after a conference with Dr. Brandis at Madras, proceeded to Darjeeling to report on the Government chinchona plantations; from there proceeded to Bombay and embarked for England on the 15th December.

3. The Inspector-General of Forests with the Government of India, having been deputed to this Presidency on special duty to confer with the local authorities on forest legislation and other matters, arrived at Madras in November. Tours were made in the forests of the marginally-noted districts, and until the close of the official year the newly-appointed Conservator was chiefly employed in travelling with the Inspector-General. The number of days spent in camp by the Conservator from the 15th December was 87.

Chingleput.	South Arcot.
Nellore.	Tinnevelly.
Cuddapah.	Coimbatore.
Bellary.	Nílgiris.
Salem.	

4. The subjoined table shows the time devoted to inspection tours by Divisional Officers :—

Names of Officers.	Designation or Rank in the Department.	Name of Division.	No. of Days absent from Head-quarters.
Mr J. W. Cherry	Deputy Conservator on special duty.	Salem	156
„ E. Dampier	Sub-Assistant Conservator.	Goomsur & Suradá	168
„ E. H. Boileau	Deputy Conservator ...	Godávari ...	160
„ R. Williams	Do. do. ...	Kurnool ...	50
„ G. Hadfield			
„ H. B. Brougham ...	Do. do. ..	Bellary	173
„ H. H. Yarde	Do. do. ...	Cuddapah ...	226
„ T. Sheffield	Do. do. ...	North Arcot ...	190
„ H. L. Wooldridge ...	Do. do. ...	South Arcot ...	182
Mr. H. A. Gass	Do. do. ...	Trichinopoly ...	80
„ G. Hadfield			9
„ H. A. Gass	Do. do. ...	Madura	217
„ W. C. Hayne	Do. do. ...	Tinnevelly ...	135
„ A. W. Peet	Do. do. ...	Coimbatore ...	180
Muhammad Ali Sahib ...	Sub-Assistant Conservator.	Anaimalai ...	189
Lieut.-Col. R. S. Jago ...	Deputy Conservator ...	Nílgiris ...	132
Head Assistant Collector ...	In charge	Pálghat ...	7
Mr. R. W. Morgan ...	Deputy Conservator ...	Wynaad ..	182
„ J Ferguson	Do. do. ...	Nilambúr ...	76
„ Stanbrough	Do. do. ...	Salem ...	152
„ W. Carroll	Sub-Assistant Conservator.	South Canara ..	198

5. Section II-A—*Reserved Forests.*—Under this section it will be convenient to report on the proceedings of the officer on special duty for the selection of reserves. Mr. Cherry has been in charge of this work during the year, and his operations have been confined to the Salem District. The Committee appointed have agreed in selecting 35 reserves estimated to contain 306·66 square miles distributed in appropriate localities over the hill ranges noted in the margin. The inhabitants concerned have been served with notices of the intended reservations, and their claims are being recorded.

Kollimallais.	Shevaroys.
Bodamallais.	Chittaries.
Pachaimalais.	Chinna Kulroyens.
Perna Kulroyens.	Javadies.
Arnoothoo Malai.	Yailagiris.

6. About 200 square miles in the sub-division were inspected and divided into convenient blocks, including the five sandalwood tracts near Denkanikóta, concerning which Government ordered a special inquiry since completed with the aid of the Sub-Collector.

G.O., dated 8th November 1881, No. 1689, Revenue Department.

7. As regards that portion of the sub-division where the Mailgiris, Goolatti, and Manchi hills and the forests of Anchetty and Pennagaram lie, no final decision has been arrived at by the Committee, but Mr. Cherry seems disposed to advocate the reservation of the whole, as the country is sparsely inhabited and the only claims advanced are those of pasturage and wood-cutting.

8. As special reports will be submitted for the consideration and orders of Government, this brief outline sufficiently indicates the progress accomplished during the year.

9. When the proposed Forest Act becomes law, the question of reserved forests will of course be reconsidered, and no doubt existing arrangements will be greatly modified. The following statement will, however, be a convenience as showing what these arrangements are, as it is a correct list of "Reserves" recognized by Government. It includes both demarcated and undemarcated areas, but excludes extensive tracts of so-called reserved forests in Wynaad, Kurnool, South Canara and other districts, because no authoritative decision concerning them can be quoted. The figures are compiled from detailed information carefully collected for the Inspector-General, and

are more accurate than in previous returns, where no distinction between reserves officially sanctioned and others has been observed.

Districts.	Estimated Area in Square Miles.	Orders by Government and the Board of Revenue.
Godávari ...	68·	G.O., No. 792, dated 10th July 1880. „ „ 1107, „ 8th September 1880.
Cuddapah ...	177·01	„ „ 1974, „ 13th June 1877. „ „ 672, „ 7th May 1878. „ „ 1832, „ 29th November 1881. Revenue Board, No. 7015, dated 8th December 1870.
North Arcot ...	22·47	G. O., No. 971, dated 1st June 1871. „ „ 820, „ 9th April 1879. „ „ 1728, „ 30th August 1879.
South Arcot ...	149·62	„ „ 4, „ 4th April 1874. „ „ 1346, „ 19th October 1874. „ „ 1189, „ 29th July 1878. „ „ 1023, „ 20th August 1880. Revenue Board, No. 6512, dated 31st August 1869.
Trichnopoly ...	6·51	G.O., No. 502, dated 21st March 1871. „ „ 1064, „ 15th June 1871.
Madura	235·43	„ „ 1681, „ 17th October 1878. „ „ 1284, „ 29th August 1881.
Tinnevelly ...	286·81	„ „ 257, „ 11th February 1881.
Coimbatore ...	145·22	„ „ 1612, „ 2nd August 1879.
Nílgiri	28·24	„ „ 2247, „ 5th December 1879. „ „ 82, „ 16th January 1878. „ „ 110, „ 29th „ 1880.
Salem	17·81	G.O., No. ——, dated 15th „ 1867. „ „ 190, „ 16th February 1880. „ „ 270, „ 2nd March 1880.
Pálghat	20·70	„ „ 1445, „ 18th October 1872.
Nilambúr ...	24·31	„ „ 1261, „ 3rd „ 1874.
Total ...	1182·13	

10. *Ganjam District.*—With reference to G.O., dated 10th July 1882, No. 722, the Sub-Assistant reports that precautions have been taken against the indiscriminate felling of valuable forest, and, by restricting operations to the more thickly-wooded tracts, hopes that all danger of over-working may now be obviated. Proposals have been submitted for the reservation of 170 square miles in Goomsur and 40 in Suradá Taluks, but the Conservator does not advocate their being declared "Reserved Forests" until this can be done under the provisions of the Forest Law. Meanwhile, however, they may be protected from alienation under the Act now before the Government of India.

11. *Godávari District.*—In G.O., dated 8th September 1880, No. 1117, Revenue Department, twelve reserves are sanctioned in the Upper Godávari Forests. Of these, Nos. I to IV have been fire-traced and boundary pillars erected; some of the others have been partially marked out with loose stone cairns during the year. None have been surveyed.

The Deputy Conservator reports that encroachments have occurred since the reserves were selected in 1876-77. In Nos. IX, X, and XII "Podu" cultivation has taken place and villages even have been built. He dwells at length upon the ruinous effects of "Podu," and draws attention to the immigration of considerable bodies of people from neighbouring territory as one serious consequence of the unrestricted indulgence which the liberality of the Madras Government affords to all who may settle in our forests. The Special Assistant Agent, while in the main agreeing with these views, expresses his inability under present circumstances to do more than use his influence in removing the people from our reserves.

12. *Cuddapah District.*—There are nine reserves covering an area of 62·87 square miles. During the year the outlay on these amounts to Rs. 6,631 against Rs. 2,819 in the year previous; the increase arises from the cost of fencing Rolla-

madugu Reserve and of fire-tracing all others on a more thorough system than heretofore. The reserves have benefited by an unusually copious rainfall, and the Deputy Conservator reports favorably of their general condition. Rs. 12,273 were realized during the year by the sale of engine fuel.

Special measures were taken for the protection of Balapalli Reserve, the results of which will be carefully noted. Experimental fellings have also been carried out to test the yield and reproduction, which, with other data collected elsewhere, will be duly recorded for future guidance. With the assistance of the Collector and other Revenue authorities, the co-operation of the villagers has been secured in protecting the reserves from fire, and so far with the most gratifying results.

The Inspector-General visited these forests, and amongst other matters carefully considered the proposals submitted by the local committee for the additional reserves alluded to at paragraph 24 of last year's report, and intends suggesting various modifications in the arrangements enumerated and sanctioned in G.O. of 21st June 1880, No. 702.

13. *Bellary District.*—Mr. Brougham was specially deputed to inspect and report upon the forest tracts of this district. Proposals were submitted for the lease of a part of the Sandúr Forests, which received the sanction of Government in an Order, dated 5th May 1882, No. 455. The Inspector-General visited the district and went thoroughly into the question of forest conservancy with the Collector, and there is every prospect of operations being initiated on a satisfactory basis.

As special reports have already been submitted containing ample details, it is hardly necessary at this early stage of the proceedings to enlarge upon what has been done; more definite information than is now possible will be recorded on all essential points in next year's report.

14. *North Arcot District.*—Government have not yet passed orders on the proposals of the Committee relating to tracts for reservation in the taluks of Pólúr, Vellore, and Chandragiri.

There are six large reserves proposed also in the taluks of Palmanér and Chittoor, but the Collector considers it unadvisable to anticipate the Forest Bill by any steps of that kind.

In Arcot Taluk an extensive tract awaits the decision of the Committee, and those lately transferred from the Salem District also require settlement.

15. *Trichinopoly District.*—Pursuant to the orders of Government, dated 4th May 1880, No. 512, the Collector and Forest Officer selected tracts on the Pachaimalais for reservation, but, owing to sickness and change of officers, the record of claims, &c., and submission of a report have been delayed.

16. *Madura District.*—The tracts selected by the District Committee and sanctioned by Government in their Order, dated 29th August 1881, No. 1284, are now treated as reserved forests; they have not, however, been demarcated, but a commencement will probably be made during the current official year. With the exception of 100 tons of firewood, no felling or departmental sales took place; the introduction of fees for cattle-grazing, though sanctioned, has not yet been effected.

17. *Tinnevelly District.*—The demarcation work in this division was interrupted by the illness of Mr. Hadfield, the officer placed in charge, who had to take leave. Operations were resumed by Mr. Hayne, the Deputy Conservator, and boundary paths fifteen feet wide, were cut for a distance of 21 miles in Ambásamudram Taluk at a cost of Rs. 1,691-7-4. The Inspector-General having in view the suggestion of certain modifications, work is suspended until his proposals are received and considered.

18. *Coimbatore District.*—The valuable forests of this district now form the charge of one Deputy Conservator, under whose orders a Sub-Assistant has been entrusted with the supervision of the Anaimalai or Southern Division, where there are three reserves as stated in the last two annual reports. The boundaries of No. II have been com-

pletely demarcated; in No. I the boundary between Ummian Malai and Vengoli has been demarcated and surveyed as far as Mavalakund, a distance of about 3½ miles, and a trench 3′ × 3′ cut from Settamadai Road to the foot of Thairmalai; in No. III nothing appears to have been done during the year owing probably to the undecided state of the boundary question with Travancore and the broken nature of the ground, which will probably necessitate a modification of the reserve boundaries in favor of a more practicable line. The principal operation during the year was the clearing of survey lines. Fire is reported to have occurred in No. I Reserve, but was fortunately extinguished by rain before doing harm Cattle-grazing has been held in check and to a great extent prevented. The collection and disposal of minor products have been under departmental control, and the system adopted seems to work satisfactorily; the transaction realized Rs. 5,505. The Collector reports favorably of the arrangements, and thinks they promise to be a success.

19. In Kollegál and Sattyamangalam Taluks three Sandalwood tracts have been reserved, demarcated and surveyed during the year. They are situated in the main road from Kollegál to Byalúr between the 20th and 31st miles; the name and area of each are given in the margin. The area is palpably quite insufficient, and must be largely increased.

	Acres.
I. Jadathalai Hullah	361 01
II Odiarpoliem	296·63
III. Byalúr	1186 39
Total ...	1844·03

20. *Nilgiri District.*—In the Mudumalai forest, 2,602 cubic feet of teak were dragged to depôt by Government elephants, and 6,677 cubic feet were carted to the Ootacamund timber yard, 1,070¾ cubic feet were conveyed to Coonoor. Roads were maintained as usual.

In Sígúr forest, 1,000 maunds of Sandalwood were stored at Masnacoil Depôt, besides 21 cart-loads of gallnuts and 10 of tamarind.

The condition of the Sígúr Ghât is reported bad.

The supervision of the Nílgiri slopes towards Coimbatore is a question which had not been decided when the report closed, but on this point next year's report will render satisfactory information.

21. The Collector visited the grass burnings on the Kondahs and elsewhere during the year, and instructions have been issued in accordance with G.O., No. 152, of 18th January 1881, regarding which no immediate action seems to have been previously taken. Special establishments must be employed for the Upper Kondahs during the fire season, as they are beyond the possibility of check by any village or villages. The Collector hopes as a rule to be able to keep fires under with the aid of Revenue Inspectors, but thinks it will not be easy to secure the hearty co-operation of villagers.

An increased forest establishment is required to prevent illicit fellings, but doubtless more help in that way will be obtained, now that the village establishments have been re-organized and a Revenue Inspector appointed for each Nád.

An extensive felling of forest above the Sígúr Ghât, the effect of which was likely to be injurious to the road, has been brought to notice, and an inquiry held by the Special Assistant Collector, but his decision is not reported.

22. *Malabar District.*—The demarcation and survey of the Chenat Nair forests were finished in 1880-81, but the map is not yet issued. Various disputes have arisen out of the demarcation, of which only one has been disposed of, and that one in terms adverse to the department. When all have been investigated, it seems not improbable that a revision of boundary will be necessary.

Timber has been worked departmentally in the reserved forests, and the collection of minor products and removal of firewood have been leased out to contractors,

23. *In Wynaad*, the settlement of the cardamom tracts is a much-felt want. Sketch maps of some of the forests have been prepared, but as no regularly-constituted reserve can yet be said to exist, it is impossible to say what value such maps may possess. The settlement of reserves is likely to raise tedious and intricate boundary disputes.

A new road has been constructed in the Padry forest, and the maintenance of old communications attended to between Gundry, Chedleth and Sultan's Battery; expenditure Rs. 207-14-0.

Timber depôts have been fire-traced and protected at a cost of Rs. 153-4-0.

24. *Nilambúr.*—Nothing of importance presents itself for notice under this section.

25. *Salem District.*—As stated in the beginning of this section, the Special Committee have been engaged in the Salem District during the year selecting reserves and prosecuting inquiries as to rights and privileges, but, pending conclusion of these investigations and the decision of Government, the district possesses nothing in the shape of a reserved forest.

26. *South Canara District.*—The Pillarkhan Reserve was enclosed by a 3-feet trench and in some parts by a wall 3½ feet high. The reserve is said to promise well, and the Sub-Assistant is sanguine that in time it will supply good timber at the Mulki Depôt and to neighbouring villages.

The conservancy of saplings of wild jack (*Artocarpus Hirsutas*) and Kiral Boghi (*Hopea Parviflora*) has been attended to.

Ten square miles have been added to the area already demarcated as Government forests, making a total of 49 square miles against 250 as set forth in G.O. of 13th January 1879, No. 78.

The expenditure on demarcation and settlement works during the year amounts to Rs. 2,480-8-10, of which Rs. 1,858-6-2 relate to temporary establishment specially employed under the Collector.

27. Arrangements were devised for the proper working of Sandalwood oil stills. In August, eleven blocks of Ghât forest between the villages of Andar and Soodi were allotted for this purpose, and permission to work 1,000 stills realized a ground-rent of Rs. 715. The consumption of fuel in the stills produced a revenue of Rs. 7,072-8-0.

Some damage was caused by the still workers cutting saplings contrary to agreement, and a fine of Rs. 944-12-0 was therefore levied on the offenders and the proceeds credited to Forest Revenue. This lesson will no doubt have a salutary effect.

A material improvement in revenue would result from the working of the Catechu forest, and this, it is hoped, may shortly be managed. The collection and sale of minor products would also enhance receipts in this division were the settlement of forests satisfactorily accomplished.

28. The following statement gives the results of the year's operation in reserved forests generally, compared with those recorded for 1880-81 :—

Description of Timber, &c.	Felled				Sold.			
	Quantity.		Value.		Quantity.		Value.	
	1880-81	1881-82.	1880-81.	1881-82.	1880-81.	1881-82.	1880-81.	1881-82.
			RS	RS.			RS.	RS.
Teakwood and Saplings ... C. ft.	42,972	59,862	34,394	63,909	96,412	51,640	1,02,749	72,216
No.	22,016	37,569			31,963	42,702		
Ebony or Blackwood and Rosewood C. ft.	... 1,287	1,833	.. 1,237	... 1,472	3,506 6,315	4,481	2,506 5,413	4,693
	Tons cwt. lb.	Tons cwt. lb.			Tons. cwt lb.	Tons. cwt. lb.		
Sandalwood ... ... Tons.	132 8 74	99 16 73	33,262	27,727	99 13 109	100 15 45	38,265	35,719
Redwood ... ... Tons.	2,400	1,825	33,256	17,232	2,400	410	40,715	6,327
Nos.	195	87			189	93		
Other Junglewood used as timber, &c. C. ft.	58,057	89,399	26,404	37,293	97,526	78,435	32,194	52,736
Railway Fuel and Fire-wood. Tons.	3,102	8,337 4 79	6,370	13,334	2,953	7,575 15 55	11,356	20,528
Bamboos ... ... Ct lds.	196	373	1,483	1,595	207	1,022	2,056	1,695
Nos.	51,753	38,545			51,404	37,900		
Forest Produce ... ... Tons.	87 11 63	108 18 64	5,626	11,847	80 17 26	86 6 38	10,880	10,838
No.	3,800	...			3,800	6,000		
Total ...	...	...	1,42,032	1,74,409	...	...	2,46,134	2,04,752

29. The increase of stock under Timber is chiefly due to felling in Wynaad, Palghát and Nilambúr. For Wynaad, there was a demand from Mysore and Tellicherry, and the demand for saplings at Calicut induced the Deputy Conservator to collect a large supply for sale; no explanation is given in the case of Palghát.

30. Large sales of engine fuel from the Ambúr and Mamandoor reserves explain the increased quantity of firewood cut during the year.

31. The collection of minor products has developed under the system introduced on the Anaimalais, and a marked improvement in forest revenue will in all probability follow extension of the same system to other divisions where feasible.

32. Sale results compare unfavorably with the figures of 1880-81, being less by Rs. 41,382. This, however, is in great measure accounted for by the fact that in Nilambúr the revenue for that year reached an abnormal sum owing to the disposal of several seasons' accumulation of stock. In Coimbatore, the sales have been fewer also, and a depression in the Redwood trade has tended to diminish receipts. A combination among the dealers in Sandalwood rendered it necessary to hold back nearly the whole of the year's supply in Salem.

33. Transactions with Public departments continue to be insignificant, but it is to be hoped that arrangements are possible whereby a larger share of business may be secured to the department with advantage to all parties.

34. The year commenced with an opening balance of timber valued at Rs. 2,00,149, and closed with a stock valued at Rs. 2,16,302. The subjoined table exhibits particulars of the increase:—

Divisions.	Balance of the Stock on the 31st March 1881.	Valuation of Timber, &c., felled.	Total Stock.	Amount of Timber sold departmentally.	Balance of Stock on the 31st March 1882.
	RS.	RS.	RS.	RS.	RS.
Goomsur and Suradá	8,222	14,593	22,815	22,091	721
Godávari	...	...	...	.	...
Cuddapah	18	8,186	8,204	1,022	7,182
Kurnool	716	...	716	379	337
North Arcot	1,407	16,104	17,511	11,402	6,109
South Arcot	1,291	5,515	6,806	5,415	1,391
Trichinopoly	...	1,880	1,880	...	1,880
Madura	33	619	652	600	52
Tinnevelly...	6,380	6,494	12,874	5,240	7,634
Coimbatore	95,608	17,202	1,12,810	31,774	81,036
Nílgiris	31,682	15,251	46,933	25,217	21,716
Salem	2,583	12,577	15,160	4,436	10,724
South Canara	19	917	936	936	...
Wynaad	14,182	23,103	37,285	9,188	28,097
Nilambúr	35,740	47,045	82,785	37,339	45,446
Palghát	2,268	4,923	7,191	3,217	3,974
Total ...	2,00,149	1,74,409	3,74,558	1,58,256	2,16,302

35. Section II-B.—*Fuel Reserves.*—The following is a statement of the area, condition and cost of fuel reserves in each forest division;—

Divisions.	Area in Acres.									
	At the end of the year.							Equal to fully stocked		
	Bare.	¼.	⅜.	½.	¾.	Full.	Total	Bare.	¼.	⅜.
1	2	3	4	5	6	7	8	9	10	11
North Arcot	700	1,900	1,400	900	600	117	5,617	..	380	560
South Arcot	11,970	28,835	40,982	17,000	..	5,011	103,798	..	5 767	16,392⅘
Trichinopoly	772	958	330	325	509	1,282	4,176	..	191⅘	132
Madura	..	13,440	..	..	..	.	13,440	..	2,688	..
Tinnevelly	4,121	..	..	1,230	..	404	5,755	..	..	..
Coimbatore	..	..	..	13,170	..	..	13,170	..	..	..
Salem	1,819	2,600	1,994	1,752	1,610	1,511	11,286	..	520	797⅘
Pálghat	317	300	400	500	500	1,000	3,017	..	60	160
Total ..	19,699	48,033	45,106	34,877	3,219	9,325	160,259	..	9,606⅘	18,042⅘

Divisions	Area in Acres—(*Continued*).				Expenditure.			Receipts.		
	Equal to fully stocked—(*Continued*).				Rupees.			Rupees.		
	⅜.	½.	Full.	Total.	In the Year.	Up to last Year.	Total.	In the Year.	Up to last Year.	Total.
	12	13	14	15	16	17	18	19	20	21
North Arcot	540	480	117	2,077	155	7,161	7,316	11,959	4,030	15,989
South Arcot	10,200	..	5,011	37,370⅘	* 2,790	29,115	31,905	4,068	25,476	29,544
Trichinopoly	195	407½	1,282	2,207⅘	713	12,929	13,642	696	4,702	5,398
Madura	..	..	..	2,688	207	2,114	2,321	..	3,791	3,791
Tinnevelly	738	..	404	1,142	112	11,808	11,920	1,317	14,634	15,951
Coimbatore	7,902	..	..	7,902	330	19,102	19,432	350	4,279	4,629
Salem	1,051½	1,288	1,511	5,167½	1,816	32,040	33,856	1,033	7,396	8,429
Pálghat	300	400	1,000	1,920	726	50,678	51,404	4,081	12,075	16,156
Total ..	20,926½	2,575½	9,325	60,475⅘	6,849	164,947	171,796	23,504	76,383	99,887

* Rs. 384, added by Mr. Wooldridge as being the cost of Manager and Gumastah in charge of Gingee reserve, and that of cumblies for watchers, are omitted.

36. With the exception of a trifling increase resulting from the correction of the survey of the Walliar reserve (Pálghat Division), and a small addition to the Gingee reserve in South Arcot, the area remains the same as last year. There is a decrease in fully-stocked area owing to large fellings in North Arcot.

37. Expenditure is not materially greater than in 1880-81, while receipts have improved by Rs. 5,245—a result chiefly due to sales in North Arcot.

38. *North Arcot District.*—Felling took place in the Amboor and Mamandoor reserves, but operations were discontinued, as the reserves were not considered sufficiently advanced to justify extensive clearings.

39. *South Arcot District.*—With the exception of an addition of 31 acres to the Gingee reserve, there is nothing worthy of special remark.

40. *Trichinopoly District.*—Planting and conservancy were attended to in the six reserves in this division. Nurseries were formed, brush-wood cleared, and 1,000 *Melia Azadirachta* plants put out in pits. The revenue has slightly improved during the year.

41. *Madura District.*—Growth in the reserves is described as promising, but financial success is doubtful owing to the distance of a market. Cattle and fires have been excluded, but the reserves are neither fenced nor surveyed.

42. *Tinnevelly District.*—Nineteen of the reserves have now repaid the cost incurred on them, and the Deputy Conservator values the trees remaining at Rs. 4,370, without, however, explaining how he arrived at this result. The reserves were transferred to the Revenue Department at close of the year in accordance with G.O., 27th January 1882, No. 112, and a sum of Rs. 1,597-11-2 paid by the Jungle Conservancy Department, being the amount spent in excess of receipts by the Forest Department.

43. *Coimbatore District.*—The extension of the Sholakarrai reserve, referred to in paragraph 70 of last Annual Report, has not yet been effected. No fires occurred in either Sholakarrai or Mettupálaiyam reserve. Expenditure Rs. 330, receipts Rs. 350.

44. *Salem District.*—Two new reserves of considerable extent were demarcated and surveyed during the year, but have not been included in the returns, because the Survey Department have not quite completed their work.

Fellings in the reserves were not extensive, but 355 tons were cut and sold to the Railway Company from Moroor.

In conservancy, the chief works have been dibbling in of seed, the weather not being favorable for broadcast sowing. Clearing of fire traces and inspection paths were attended to. The seed put out germinated fairly. Fires occurred, but were speedily extinguished.

45. *Malabar District.*—The Walliar reserve, in the Pálghat Division, is divided into eight blocks and lettered A to H. In B block (Pullumpara), and A, B and F blocks (Warlapadi), the right of cutting junglewood and fuel was leased to a contractor. Teak loppings and bamboos were removed on the same plan from A block (Pullumpara).

The wire fencing was repaired, and two fire traces of 12 feet wide were cleared along both sides of the railway through the reserves to avoid a repetition of the fires of last year.

Fire occurred in C block (Pullumpara), but was at once got under by the contractor's men.

46. SECTION II-C *Plantations.*—The area now under plantation is 8883·62 acres, of which 3815·2 are timber, 3714·17 "firewood," and 1,277 acres "mixed," while 77·25 acres represent experimental plantations.

47. The following table gives the distribution of Area, Expenditure, and Receipts :—

NAME		AREA PLANTED.			AREA ACCORDING TO CLASS.				
Division.	Range.	In the Year.	Up to last Year.	Total.	Timber.	Mixed	Firewood.	Experimental.	Total.
1	2	3	4	5	6	7	8	9	10
		ACRES.	ACRES.	ACRES.	ACRES.	ACRES.	ACRES.	ACRES.	ACRES
Ganjam	Goomsur and Suradá	..	3½	3½	..	..	..	3½	3½
Cuddapah ..	Cuddapah	..	* 986	986	..	..	949	37	986
North Arcot ..	North Arcot ..	..	1,060⅛	1,060⅛	..	..	1,035⅛	25	1,060⅛
South Arcot ..	South Arcot ..	..	583	583	..	..	571¾	11¾	583
Trichinopoly ..	Trichinopoly ..	9½	1,135½	1,145	..	..	1,145	..	1,145
Madura	Madura	..	22	22	8½	..	13½	..	22
Coimbatore ..	Coimbatore ..	..	202½	202½	202½	..	..	..	202½
	Mudumalai ..	..	..	..	..	..	..	..	1
Nílgiris ..	Sígúr	..	1,349½	1,399½	122½	1,277	..	..	1,399½
	Ootacamund and Coonoor.	50	..	..	..	..	..	..	..
Salem	Salem	..	5	5	5	..	..	..	5
South Canara ..	South Canara ..	..	109	109	109	..	..	..	109
Malabar	Nilambúr	..	3,368	3,368	3,368	..	..	..	3,368
	Total ..	59½	8,823⅛	8,883⅝	3,815½	1,277	3,714 17/20	77¼	8,883⅝

* Includes 4 acres omitted in last year's report, 1880-81

Name		Expenditure			Receipts		
Division	Range	In the Year	Up to last Year	Total.	In the Year	Up to last Year	Total
		11	12	13	14	15	16
		Rs	Rs	Rs	Rs	Rs	Rs
Ganjam	Goomsur and Surada .	39	428	467	..		..
Cuddapah	Cuddapah ..	449	44,303	44,752	57	491	548
North Arcot	North Arcot ..	3,913	60,465	* 64,378	237	30,040	† 30,277
South Arcot	South Arcot	616	40,781	41,397	1,670	2,725	4,395
Trichinopoly	Trichinopoly	3,201	51,354	54,555	4,539	14,241	18,780
Madura	Madura	148	4,934	5,082	266	495	761
Coimbatore ..	Coimbatore	1,090	49,051	50,141	..	..	..
Nilgiris	Mudumalai	4,453	71,598	76 051	5,303	36,631	41,934
	Sigur . .						
	Ootacamund and Coonoor		..		..	.	.
Salem	Salem .. .	7	2,545	2,552		1	1
South Canara	South Canara	68	10,289	10,357		.	
Malabar	Nilambúr	19,547	3,82,980	4,02,527	26,183	2,35,684	2,61,867
Total ..		33,531	7,18,728	7,52,259	38,255	3,20,301	3,58,563

* Includes 946 rupees, which was the expenditure of Thengal abandoned in 1879-80
† Includes 751 rupees, which was the receipt of Thengal abandoned in 1879-80

48. The extension during the year amounted to 59½ acres against 132 in 1880-81, and would have been greater but for the restriction of operations in Trichinopoly Division. These extensions occurred in the Nílgiri and Trichinopoly Divisions.

49. The variations in Receipts and Expenditure between this and last year call for no remark. Expenditure was higher by Rs. 1,661 and receipts lower by Rs. 512.

50. *Cuddapah District.*—In the experimental plantation, the Red Sanders (*Pterocarpas Santalmus*) has benefited by a favorable season, and the growth is most promising. Teak, however, shows little improvement, and Ceara rubber plants reported last year as having germinated appear to have made small progress. No reports have been received of further experiments with Inga Saman.

The Condition of the four fuel plantations is satisfactory, the rainfall having been favorable.

51. *North Arcot District.*—The failure of the North-east Monsoon in this district appears to have retarded progress in the plantations.

Tiruvallam Plantation—consists of five blocks of about 100 acres each. The first block was replanted four years ago, but scarcely more than a third of the plants survive. In the other blocks, failures have been replaced during the year.

Keelminnel Plantation.—All failures have been replaced, and in parts unfavorable to Casuarina, plants of *Inga Saman*, *Inga Dulcis*, *Albizzia Lebbek* and *Acacia Arabica* have been substituted.

Veeringipuram Plantation.—150 acres are fully planted and the trees ready to cut.

In the other plantations, there is nothing of particular interest or importance to record. The Collector would prefer broadcast sowing of indigenous trees to the planting of Casuarina, as being a more simple and less expensive mode of cultivation.

52. *South Arcot District.*—The operations of the year were, repairing fences, collection of seed and general maintenance.

Eight thousand seven hundred and eighty-seven stunted and inferior trees were cut out and sold; 227 tons of green firewood billets and 142 tons of firewood loppings were sold. Receipts Rs. 1,670.

The Merkanum and Maltarbed plantations were thinned out.

The plantations generally are reported as thriving, and the Deputy Conservator advocates annual extensions. The satisfactory result of operations in the Maltarbed induces the Deputy Conservator to think that planting of low banks would be attended with success.

53. *Trichinopoly District.*—There are 1,145 acres under cultivation, forming 16 distinct plantations. The expenditure during the year was Rs. 3,201, and receipts Rs. 4,539. The plantations are of 6 to 11 years' standing, and have recouped about one-third of the gross outlay incurred. Elamanúr, the oldest plantation, produced a revenue of Rs. 1,850.

Conservancy has been generally attended to.

54. *Madura District.*—The condition of the two small teak plantations is anything but satisfactory, and only a trifling outlay has been incurred upon them during the year.

The acacia plantation at Kodaikánal will be disposed of in accordance with G.O. of 18th March 1882, No. 320. The Deputy Conservator reports favorably of the Eucalyptus in this plantation. Six hundred and three trees were cut and sold as fuel for Rs. 266.

55. *Coimbatore District.*—The three small experimental teak plantations on the Anaimalais are on the whole favorably spoken of, but beyond fire-tracing them at a cost of Rs. 18-12-0 no outlay was incurred, nor is it proposed in future to spend any more money on them except for that purpose. The conservancy of indigenous teak, &c., is attended with less outlay and more satisfactory results.

The Thallamalai Sandalwood Plantation has not proved a success, and no further expenditure is contemplated beyond the pay of watchers.

The Byalúr Sandalwood Plantation is progressing favorably and its maintenance rendered considerably less expensive by the reduction in the number of men permanently employed hitherto.

56. *Nilgiri District.*—The Mudumalai and Benni teak plantations were pruned and fire-traced at a cost of Rs. 194.

The Sembrageddi Sandalwood Plantation at Sigúr was fire-traced for Rs. 49-8-0, and is doing well.

57. *Ootacamund Australian Plantations—Aramby.*—Ten acres of grass land were planted with 12,000 *Eucalyptus Globulus*; 3,000 failures occurred which were replaced, and 4,000 failures have since been observed which must be replaced next year; not only is growth slower in grass land, but it is much more difficult to establish young plants.

Governor's Sholah.—The growth from coppice is good in this plantation, but greatly impeded by cattle trespass.

Hoopatty Plantation will, it is stated, be ready for felling next year.

Snowdon Plantation.—The Deputy Conservator proposes to clear the dense coppice by issuing head-load passes for its removal.

Marlimand Plantation.—Coppice was a failure; preparations for replanting with Eucalyptus have been made.

Sheffield Plantation.—The Deputy Conservator thinks the growth from second coppice so rapid that this and similar plantations might, with advantage, be cut every second year for fuel.

Buthry Plantation.—About 2,000 failures were replaced, and 5,000 remain to be made good.

Cully Plantation was originally reserved for high timber, but had to be cut for fuel; it is throwing up good coppice.

Baikie Plantation is now being thinned; *Arnacal* and *Kooli* were fire-traced, and there are many failures in *Andy* to be replaced.

Chowghat Cully, originally reserved for high timber, is to be cut down as fuel.

Chemangoolie Plantation.—15,000 casualties replaced, 35 acres weeded, fire-path traced. General appearance unpromising.

Muttinad Plantation.—Forty acres cleared of undergrowth, 45,000 pits dug and planted with *Eucalyptus Globulus*, and 10,000 casualties replaced during the year. Condition fair. Extension proposed next year.

Devi Shola Plantation promises to become a good timber plantation; the growth is excellent; 2,000 failures replaced and 15 acres weeded.

58. *Wellington Australian Plantations.*—Fire got into Rallia plantation, but without doing harm.

Concerning *Bleakhouse, Newman, Blackbridge, Tippa Katchee* and *Little Rallia plantations*, there is nothing of interest to record.

The "Old Forest" plantation is still being cut for fuel, and sales realized Rs. 1,910-15-6.

The gross expenditure on the Ootacamund and Wellington plantations was Rs. 4,177, and receipts Rs. 5,303.

59. *South Canara District.*—The Parappa teak plantation shows few signs of improvement; 2,000 casualties occurred and were replaced. There are now about one lakh of established plants of all ages. Weeding and other works have been attended to.

60. *Malabar District—The Nilambúr plantations* now cover an area of 3,436 acres; there were no extensions during the year. The whole area was weeded, 1,813 acres pruned, 432 acres cleared of parasites, &c., 72,621 teak saplings marked and felled, and 37,569 collected in plantation depôts, 44,858 floated and stored in marked depôts. The condition of the plantations generally is highly satisfactory. There are about 80,000 natural-grown blackwood trees, *Dalbergia latifolia*, interspersed among the teak.

Expenditure under viii (*d*), (*e*) and (*f*)—Rs. 9,982-8-6.

61. Section III—*License and Voucher System.*—There is an improvement of Rs. 57,830 upon the revenue collected under this system in 1880-81. The increase is credited to timber, firewood, bamboos, minor products and grazing dues.

62. The sale of sâl sleepers in Goomsur and the higher seigniorage levied in Kurnool, coupled with more efficient control ensured by the transfer of the issue of passes from petty village authorities into the hands of Revenue and Forest Officers as sanctioned by Government in that district, accounts for the results under Timber.

63. Under Firewood, the increase is attributable to larger transactions in Railway fuel, to better supervision and enhanced receipts in South Coimbatore, and to the working of sandal-oil stills in South Canara.

64. In bamboos and minor produce, the improvements effected in South Coimbatore are the principal causes of the higher receipts.

65. Under Grazing Dues, the increase is to some extent nominal, as this item appears to have been omitted from the accounts last year.

66. Particulars will be found in the subjoined abstract:—

Description of Timber and other Produce	Measurement or Quantity.	Quantity.		Amount realized.	
		1880-81.	1881-82.	1880-81.	1881-82.
				Rs.	Rs.
Teak	Trees	9	..	45	..
	Cubic feet	..	..		
Blackwood	Do.	..	2,650	155	580
Other Junglewood	Do.	706,131	900,196	83,721	1,05,125
	Posts	189	..		
Firewood and Railway fuel	Tons	52,611	63,550	63,644	83,669
Charcoal	Do.	2,638	2,222	9,267	7,181
Bamboos	Cart-loads	55,623	46,428	43,308	51,665
	Number	14,261	25,100		
Forest Produce	Tons	2,523	2,383	31,928	36,240
	Number	..	..	..	..
Grazing and Fodder grass	..	..	..	..	5,438
Total	..	..	..	2,32,068	2,89,898

67. With the exception of Wynaad and Nilambúr, the license and voucher system obtains more or less in all divisions.

68. *Goomsur and Suradá.*—The revenue amounts to Rs. 39,879, chiefly the proceeds of 6,600 sâl sleepers sold to Messrs. Stephenson and Co. These were obtained in great measure from the timber rejected and abandoned by contractors in former years to rot and burn in the forests, and nothing more clearly illustrates the reckless waste and damage that goes on in the absence of proper supervision. When the demand for sleepers reached Ganjam in 1879, many local merchants embarked in the trade, purchased licenses, felling indiscriminately and selecting only the most profitable logs for use. That the remnants should have realized so much is a significant fact.

69. *Godávari.*—Here revenue has fallen off, and matters generally are in a very unsatisfactory condition. Mr. Boileau, the Deputy Conservator, a zealous and energetic officer, complains bitterly of the peculiar difficulties he has to contend with, but it would be out of place to enter at length upon the subject here. The Conservator hopes to visit the district soon, and in consultation with the local officers place things on a better footing.

70. *Madura.*—The revenue shows an improvement, which is due to better supervision.

71. *Salem.*—There is a falling off in revenue, the sale of engine fuel is smaller, the decrease amounts to Rs. 4,700, and is not clearly explained by the officer in charge.

72. *North Arcot.*—The revenue is satisfactory. Bamboo contracts have been leased out in certain jungles, care being taken, however, not to allow the trade to fall entirely into the hands of contractors to the prejudice of cultivators and other consumers.

73. *Kurnool.*—A salutary change has been wrought by entrusting the issue of tickets, &c., to the hands of Forest and Revenue officers in lieu of petty village authorities, under whose conduct the most flagrant abuses appear to have occurred.

74. *Cuddapah.*—Here also improvement has been effected by a change of system. Tickets are now issued and recovered by persons specially employed and paid by results, *i.e.*, by a percentage on revenue collected and properly accounted for. The plan has much to recommend it, though not in exact accordance with the general principles hitherto observed in this Presidency that Forest officials should not collect money.

The Railway Company decline direct transactions, and insist upon the services of middlemen as contractors.

75. SECTION IV.—*Yield of Forests.*—The usual statement is annexed, and gives all necessary information:—

Description of Timber and other Produce	Measurement or Quantity	Quantity removed.					
		By Departmental Agency.		On License.		On Free Pass.	
		1880-81.	1881-82	1880-81.	1881-82.	1880-81.	1881-82.
Timber	Cubic Feet.	102,316	151,114	706,131	902,846	62,089	76,213
	Number	21,986	37,701	198	..	..	270
Sandalwood	Tons	132	100	..	..	..	..
Red Sanders	Do	2,400	1,825	..	..	..	..
	Posts	..	87	..	..	..	..
Firewood and Railway fuel	Tons	1,532	8,337	52,611	63,550	5,794	1,066
	Number	52	128	..	..	..	..
Bamboos	Cart-loads	196	373	55,633	46,428	1,385	1,315
	Number	51,753	38,545	14,261	25,100	..	..
Charcoal	Tons	..	..	2,038	2,221	..	..
Forest Produce	Do.	88	98	2,523	2,383	..	..
	Number	3,800	..	..	.	..	..

The remarks of the several previous sections explain the variations under departmental and license working, but nothing has been said of removals under the free-pass system. The foregoing statement shows a considerable increase under timber in Coimbatore and Madura Divisions, and in the absence of any explanation as to the Coimbatore figures, it is presumably due to more carefully-kept accounts rather than to abnormal demands. In Madura, the increase is ascribed to the destructions of house property by fires and extensive grants of timber for rebuilding. The quantities of timber granted on free pass to ryots throughout the department for building and agricultural purposes are Cubic Feet 33,057 and 43,155, respectively.

76. SECTION V—*Financial Results.*—Revenue under all heads during the year amounts to Rs. 5,06,456, while expenditure, including A, "Conservancy and Works," and B, "Establishments and Contingencies," reaches the sum of Rs. 3,89,892, leaving a net surplus of Rs. 1,16,564.

77. The following is an account of the receipts and charges for the year:—

Head.	Receipts.	Amount.	Head.	Expenditure.	Amount.
		Rs.			Rs.
				A.—*Conservancy and Works.*	
I	Timber and other produce removed from the forests by Government agency—		I	Timber and other produce removed from the forests by Government agency—	
	(a) Timber	1,35,972		(a) Timber	57,014
	(b) Firewood and charcoal	20,528		(b) Firewood and charcoal	4,353
	(c) Bamboos	1,695		(c) Bamboos	776
	(d) Sandal-wood	35,719		(d) Sandal-wood	9,851
	(e) Grass and other minor produce	10,838		(e) Grass and other produce	7,247
II	Timber and other produce removed from the forests by consumers or purchasers—		II	Timber and other produce removed from the forests by consumers or purchasers	10,656
	(a) Timber	1,05,705	III	Confiscated drift and waifwood	1,433
	(b) Firewood and charcoal	90,850	IV	Revenue from forests not managed by Government	..
	(c) Bamboos	51,665	V	Rent of leased forests and payments to shareholders in forests managed by Government	4,680
	(d) Grass and fodder grass	5,438	VI	Live and Dead Stock—	
	(e) Other minor produce	36,240		(a) Purchase of cattle	..
III	Confiscated drift and waifwood	4,956		(b) Feed and keep of cattle	3,882
IV	Revenue from forests not managed by Government	..		(c) Plant, tools, and instruments	489
V	Miscellaneous—		VII	Communications and Buildings—	
	(a) Fines and forfeitures	579		(a) Roads and bridges	3,329
	(b) Refunds	3,923		(b) Buildings	2,351
	(c) Other sources	2,348		(c) Other works	513
			VIII	Demarcation, improvement and extension of forests—	
				(a) Demarcation	5,658
				(b) Compensation for land and rights	6,705
				(c) Survey and working plans	1,814
				(d) Plantations	20,444
				(e) Protection from fire	10,694
				(f) Other works	7,739
			IX	Miscellaneous—	
				(a) Refunds	3,329
				(b) Law charges	49
				(c) Other charges	538
				Total of A, Conservancy and Works	1,63,544
				Total of B, Establishment	2,26,348
				Grand Total of all Expenditure	3,89,892
				Add Surplus Revenue of the Department	1,16,564
	Total	5,06,456		Total	5,06,456

78. A further statement, incorporating the increase or decrease in value of stock with actual money results, is appended :—

Divisions	Working Charges.	Establishment and Contingencies.	Total Cost.	Receipts.	Difference.	Add Increase or Decrease in Value of Stock.	Net Results
	Rs.	Rs	Rs	Rs.	Rs	Rs.	Rs.
Central Office	..	45,862	45,862	..	— 45,862	..	— 45,862
Goomsur and Surada ..	8,986	2,822	11,808	62,270	+ 50,462	— 7,498	+ 42,964
Bhadrachalam	549	6,427	6,976	12,694	+ 5,718	..	+ 5,718
Cuddapah	16,222	14,195	30,417	46,801	+ 16,384	+ 7,164	+ 23,548
Kurnool	1,057	13,919	14,976	29,304	+ 14,328	— 379	+ 13,949
North Arcot	19,537	11,569	31,106	41,103	+ 9,997	+ 4,702	+ 14,699
South Arcot	7,108	10,258	17,366	13,052	— 4,314	+ 100	— 4,214
Trichinopoly	3,920	1,350	5,270	5,175	— 95	+ 1,880	+ 1,785
Madura	2,561	12,168	14,719	22,765	+ 8,046	+ 19	+ 8,065
Tinnevelly	12,122	14,964	27,086	24,132	— 2,954	+ 1,254	— 1,700
Coimbatore	29,723	25,039	54,762	93,583	+ 38,821	— 14,572	+ 24,249
Nilgiris	21,361	13,479	34,840	34,377	— 463	— 9,966	— 10,429
Salem	7,859	19,036	26,895	42,537	+ 15,642	+ 8,141	+ 23,783
South Canara	2,946	6,125	9,071	10,293	+ 1,222	— 19	+ 1,203
Wynaad	6,048	11,379	17,427	10,707	— 6,720	+ 13,915	+ 7,195
Nilambur	20,727	11,979	32,706	49,926	+ 17,220	+ 9,706	+ 26,926
Palghat	2,828	1,606	4,434	7,737	+ 3,303	+ 1,706	+ 5,009
Bellary	..	4,171	4,171	..	— 4,171	..	— 4,171
Total ..	1,63,544	2,26,348	3,89,892	5,06,456	1,16,564	+ 16,153	+ 1,32,717

79. From this it is apparent that taking the increased value of stock with the surplus revenue, after allowing for all charges and stock decrease, the net result is Rs. 1,32,717.

80. It is doubtful if all officers adopt the same process in valuing stock. The matter will be investigated and a uniform method of calculating values introduced before submission of next year's report.

81. Stock has fallen in value in the divisions marginally noted, owing to restrictions of felling operations and extention of sales.

Ganjam, Coimbatore and Nilgiris.

82. The proposals in paragraph 143 of the Report for 1879-80, relative to the apportionment of fixed establishment charges, have received the sanction of the Board of Revenue in their Proceedings, dated 22nd November 1881, No. 2911, and the following statement is the result of endeavours to give them effect :—

Heads.	Revenue.	Expenditure.		Total Expenditure.	Net Result
		A, Conservancy and Works.	Establishments.		
	Rs.	Rs.	Rs.	Rs.	Rs.
Departmental working exclusive of receipts from Plantations and Fuel Reserves	1,42,993	87,803	81,414	1,69,217	— 26,224
Working under the License system	2,90,197	12,089	60,869	72,958	+ 2,17,239
Reservation and Conservancy, &c., of Plantations and Fuel Reserves and other Capital Expenditure connected therewith	61,759	59,736	78,966	1,38,702	— 76,943
Miscellaneous Charges not debitable to any of the heads	11,507	3,916	5,099	9,015	+ 2,492
Total ..	5,06,456	1,63,544	2,26,348	3,89,892	+ 1,16,564

83. This is a first attempt, and although the figures, as far as they go, may be accurate, they are not to be unreservedly accepted. That the license and voucher system is the most remunerative in a monetary sense may be admitted, but the great disparity between it and departmental working, as exhibited in this statement, is open to question.

84. The matter is one requiring careful deliberation if true results are to be ascertained, and it is even doubtful if an accurate division of charges is possible until a clearer distinction between the different branches of work is secured. The proposals

may, to a certain extent, be theoretically correct, but the instructions given for the apportionment of supervision charges appear to leave each officer at liberty to settle for himself what the "fair allowance" for time spent and work done in each field of operations may be. This is not sufficient, and the officer's calculation should be subject to audit and check by comparison with returns bearing on the point. Again, much will depend upon the system followed in valuing stock departmentally cut and stored. When timber, &c., is removed by purchasers on license, Government realize their profit (seigniorage) at once, but in large departmental operations it may be one or two, or even three seasons before the actual value of the timber is realized, while, under present rules, credit is taken in the mean time for no more than its bare cost to the department. Even this is not shown to the credit of departmental supervision under the proposed apportionment of charges, for results are calculated solely on the actual amounts realized in cash. The fluctuations which will necessarily ensue are likely to mislead all who have not the opportunity of investigating their cause. The result of extensive sales would be to show in one year the fruits of several successive seasons' labor, and on other occasions, while the departmental agency might be doing equally good work, the year's outturn would not exhibit its value at all. Such an event might occur at an important financial crisis, and the interests of the department be prejudiced by the application of a test of its own devising.

85. SECTION VI, GENERAL REMARKS—*Goomsur.*—The Collector has issued orders regulating the traffic in timber from private forests, and these have been followed by highly satisfactory results. The Sub-Assistant gratefully acknowledges the support he has received from the Collector and Revenue authorities.

86. *Godávari.*—Amongst many other matters calling for attention, the Deputy Conservator reports that the free-pass system is abused.

87. *Kurnool.*—The Forest officer's quarters are still unbuilt, although the full amount of the estimate has been paid over to the Public Works Department.

Fires are reported as causing serious damage in these forests.

88. *Cuddapah.*—The hearty co-operation of the Collector and Revenue authorities in this district augurs well for the future prospects of conservancy. The Collector fully appreciates the baneful effects of fires, and is doing his utmost to strengthen the hands of the Forest officer in contending with them.

89. *North Arcot.*—In this district also; the department is fortunate in receiving much useful help and advice from the Collector: the late and present Collectors have both evinced the greatest interest in forest affairs.

90. *South Arcot.*—The claims advanced to Tiruvannámalai Hill by the Pagoda Trustees have been disallowed, and the Department has been confirmed in possession. The Kulroyen disputes are still undisposed of, but are being thoroughly investigated. Fires have occurred, but in every case extinguished without damage.

91. *Trichinopoly.*—There seems to be a prospect of larger transactions with the South Indian Railway in fuel—a result which is due to the exertions of Mr. Gass, the officer lately in charge of Madura and Trichinopoly.

92. *Madura.*—The collection of minor produce is capable of development under an improved system; the revenue has not come up to the estimate this year owing to the miscarriage of a contract.

The establishment seems active and vigilant, judging from the returns of cases detected and prosecuted.

93. *Tinnevelly.*—Demarcation of the Travancore boundary is still unfinished. The boundaries of estates adjacent to Government forests have not been adjusted owing to the want of correct traverse areas.

Attempts have been made to evade the re-clearance of Zemindari boundaries, but this very necessary precaution will be enforced with the help of the Collector, to whom the department is indebted in many ways.

94. *South Coimbatore.*—The demarcation of Ponakad or Kumeri holdings is approaching completion; a survey will then be made, and it is hoped that the restriction of this destructive practice may be effectually maintained.

95. *Salem.*—Some important changes in the system of issuing and recovery of license and tickets have recently been introduced at the Collector's suggestion, and promise well.

An important case of illicit felling of wood in Government forests near Mallapuram was discovered and prosecuted, and the offender, a railway fuel contractor, sentenced to rigorous imprisonment. Another case is under trial.

96. *Wynaad.*—The Deputy Conservator, Mr. Morgan, has established an experimental plantation or botanical garden, and displays much interest in the introduction of new and valuable plants.

The season appears to have been an unhealthy one in Malabar.

97. *Nilambúr.*—The Deputy Conservator, Mr. Ferguson, records some interesting observations regarding the plants entrusted to him for experimental cultivation.

98. Four thousand and six hundred mahogany seedlings have been planted out during the year; the casualties are estimated at 200.

99. The first mahogany plant was received in 1873, and has now attained a height of 57¾ feet, and measures at base 39 inches and at 5 feet above the base 27½. It has gained 6¾ feet in height during the year, and increased its girth by 5 and 2½ inches at base and 5 feet above—a very satisfactory development. The younger plants, though healthy and vigorous, have not been so progressive owing to the ravages of a green caterpillar which devours the leaves and tender bark, in some cases regularly ringing the tree but generally confining itself to the side. The damaged plants were topped below the wounds, but were again attacked by another tiny caterpillar, borer fashion, eating the pith of the succulent shoots. This caterpillar becomes a small whitish moth, which Mr. Ferguson has never previously observed, and suggests that it may have been imported as larva with the seed.

100. The India-rubber plants escaped this little pest.

101. *The Castilloa Elastica.*—Are doing well; the oldest plant having lost its top has not regained the height it registered last year, but has developed in size and all promise well.

102. *The Hevia Brazilliensis.*—Has improved in height and girth, but retains its lanky ill-furnished habit. Mr. Cross put down some cuttings in February 1881, but all failed to root, and Mr. Ferguson has met with no better success.

Mr. Cross also layered a branch of *Castilloa*, but though the portion nearest the bole rooted, the twigs failed to strike, and Mr. Ferguson thinks that both plants require greater maturity to be successfully propagated by cuttings.

103. *Ceara or Manihot Glazovii.*—Besides the 105 plants, 84 cuttings have thrown out shoots, a number of them have rooted, and others partially so, but they have yet to be tested by the monsoon.

104. The *Ceara* rubber trees received in 1878 vary in height from 29 to 30 feet, and in girths from 19 to 26 inches at base and 13 to 18 inches at 5 feet above the base. The growth of those planted in January 1881 is, however, most remarkable, two of them having attained a height of 23 feet and girthing 10½ and 9½ inches at base, both are 20 feet to the first branch and flowered and seeded ere they had been six months planted.

105. In connection with this, it may be remembered that some years ago Colonel Beddome remarked the early seeding propensity of Nilambúr-grown teak and feared it might indicate premature deterioration, but nothing of the sort is apparent.

106. The finest plant was blown down in the cyclone of last November, after attaining a height of 34 feet and of 18 feet to its first branch. It had a large crop of immature seed, and Mr. Ferguson, by carefully planting and watering the bearing

branches, has saved 1,400 seeds; all, of course, will not prove fertile, but 32 plants have already been raised from them.

107. Mr. Ferguson has had the roots of the tree laid bare and tapped, and succeeded in drawing quarter ounce of rubber of a quality inferior to that obtained by bleeding the stem, but this may be due to absence of atmospheric action, and it is remarkable that the roots should have retained their peculiar property for so long after the accident.

108. Of *Ceara* rubber seeds, 9,000 have been collected and sown in nursery beds on 22nd April and 3rd May, and of these 1,200 have germinated already (*i.e.*, 9th May).

109. Mr. Ferguson, while allowing that the *Ceara* and *Hevia* varieties are more forward and likely to reach maturity earlier than *Castilloa*, states that the latter is more robust in its early stages and will probably outstrip the others eventually and prove longer-lived.

110. The experiments with bamboo seeds have been successful. The *Bambusa Gigantea* seed obtained by Colonel Beddome from Moulmein in 1877 is now 60 feet high and girths 10 inches. The yellow bamboos received from the Botanic Gardens in Ceylon in 1879 have prospered.

111. *South Canara.*—As attention has been drawn to the manufacture of sandal-wood oil in this district, it may be of interest to explain the process briefly. Sheds to contain 20 or 30 stills are erected near water. The still consists of one large and one small earthen vessel, the former being fixed on a fireplace and the latter half-buried in the ground. They are connected by a copper tube, one end of which is inserted in the lid of the larger vessel and the other rests on the edge of the smaller one. The large vessel is then half-filled with water into which sandalwood chips previously soaked in water are thrown and the lid securely fastened, plastered over with clay and covered with a thick cloth to prevent the escape of steam. The receiver, of course, fills, and its contents are retransferred, which is repeated till the oil distills.

112. *Promotions, &c.*—There have been various changes in the controlling grades of the department during the year. The vacancies created by the retirement of Colonel Beddome, the Conservator, and of Mr. Williams, Deputy Conservator, 2nd-class, enabled Government to promote the Probationary Assistants and to abolish those appointments altogether. Major Campbell-Walker having succeeded Colonel Beddome as Conservator, Mr. J. W. Cherry was confirmed in the appointment of 1st-class Deputy Conservator, in which he had acted during Major Campbell-Walker's absence on furlough. The other vacancy in that rank was bestowed on Mr. C. G. Douglas. Messrs. Morgan, Hayne and Peet became Deputy Conservators of the second class, and Messrs. Wooldridge, Gass and Boileau rose to the third, while the Probationary Assistants, Messrs. Stanbrough and Hadfield, filled the fourth class vacancies.

113. *Conclusion.*—Among the most important events of the past year may be recorded the retirement of Colonel Beddome and the deputation to this Presidency, on special duty, of Dr. Brandis, Inspector-General of Forests with the Government of India.

During Colonel Beddome's tenure of office, the forests of the Presidency were very thoroughly explored and reported on, and most valuable contributions made to our knowledge of their economic value and botanical interest.

Dr. Brandis by his visit has given an impetus to conservancy and thrown much light on many doubtful points regarding the selection and constitution of reserves and the protection of forests against fire and cattle. To his experience we are indebted for much valuable information, and to his labors and that of the Committee appointed under G.O., dated 24th March 1882, No. 338, are due the passing of a Forest Act which only awaits the consent of the Governor-General to become law, and, by supplying a long-acknowledged defect, place the department on a better footing.

114. Colonel Beddome entered the department in 1857, succeeded Dr. Cleghorn as Conservator in 1867, officiated in that capacity until 1870, when he was confirmed, and retired on the 15th December 1881 after a departmental service of twenty-four years, fourteen of which were passed at the head of the department.

115. A brief retrospect of transactions during this lengthened period of service may not be without a certain interest at the present time, when changes of vital importance to conservancy are occupying attention.

116. The department began operations in 1856 under the auspices of Dr. Cleghorn, by whom the first annual report was submitted.

After an interval of sixteen years, a re-organization took place in 1872, by which forest administration was committed to the Board of Revenue, and Collectors were invested with the authority of District Conservators. Local Forest officers thus became the Collector's Assistants, and the Conservator was styled Inspector of Forests and constituted a general adviser on forest affairs to Government, the Board and Collectors.

This system was abandoned in 1876, and control once more devolved on the Conservator as head of the department.

Matters have remained on this footing unti now, when we are once more on the eve of a new departure.

117. The forests of Anaimalai, Ségúr and Mudamalai, with those of Salem and North and South Canara, were the first brought under the care of this department. Operations gradually extended, however, and by 1862 the forests of Wynaad, Chenetnair, Madura, North Arcot and Cuddapah were included. At this time also the Nílgiri sholas, Australian plantations, and chinchona experiments formed part of the Conservator's charge, and about the same period the Nilambúr teak plantations were first entrusted to the care of a trained forester, as sub-assistant, under the orders of the Conservator.

118. In 1862-63, the forests of North Canara were transferred to the Bombay Presidency, while those of Bolamputty, Bhaváni and Kollegál, in the Coimbatore District, Goomsur and Suradá in Ganjam, and Kurnool, were brought under conservancy.

At Dr. Cleghorn's retirement in 1867, the forests of South Arcot and Tinnevelly had been added to the list, and the Golgonda Hill tracts, which had been for a short time under the department, were transferred to the Collector.

119. A few years later, when the re-organization of 1872 occurred, forest operations had everywhere developed, and divisional charges were re-arranged with a view to more efficient management. Plantations and fuel reserves were in progress, and the department was strengthened by the addition of several new officers.

120. Since that period, officers have been put in charge of Trichinopoly and the Upper Godávari, and others have submitted special reports on the Bellary, Kistna and Nellore jungles. An officer has also been detached on special duty for the selection of reserved forests, and by this means proposals have been framed for the Coimbatore, Tinnevelly and Madura Districts.

121. Efforts have also been directed towards the development of revenue and a more efficient control generally, but the absence of a forest law, the paucity of officers and other peculiar difficulties have presented serious obstacles.

122. Financially, the department has not yet achieved brilliant results, nor has revenue risen in proportion to increased outlay.

123. During the first twelve years under Dr. Cleghorn, receipts amounted to Rs. 34,21,968 and charges to Rs. 20,97,988, leaving a balance in favor of Government of Rs. 13,23,977, exclusive of timber on hand to the value of Rs. 6,78,536 on the 31st March 1868.

124. During the next fourteen years, that is, from 1868-69 to 1881-82, the charges incurred reached the sum of Rs. 51,18,161 and receipts that of Rs. 58,85,429, leaving a balance of Rs. 7,67,268 in favor of Government, besides the value of timber on hand on 31st March 1882, viz., Rs. 2,16,302.

125. The average annual outlay from 1856 to 1868 is Rs. 1,74,832, while from 1869 to 1882 it is Rs. 3,65,583. The revenue for the first period averages

Rs. 2,85,164 and for the second Rs. 4,20,388. The annual surplus therefore between 1856 and 1868 averages Rs. 1,10,332, while that for the fourteen years following is Rs. 54,805.

126. In explanation of these figures, it may be observed that the department at first confined itself to the chief timber-producing forests of the Presidency, and in those days the receipts from North Canara and the Anaimalais were very considerable. The extension of operations to less remunerative tracts, the heavy outlay on plantations and fuel reserves, the loss of North Canara and the abolition of the Indian Navy, which was a large purchaser of Anaimalai timber, have all combined to reduce the annual surplus. The price of labor has everywhere risen, while the necessity for capital outlay yielding no direct or immediate return has grown with the development of the department.

Over-felling in earlier years and, in more recent times, an increased liberality on the part of Government in the shape of free timber and fuel, &c., notwithstanding the inroads on forest resources by cultivation and railways, are also no doubt answerable to some extent for reduced revenues, and, further, it must be admitted that if the forests had been demarcated as taken up, and the annual surplus devoted to real conservancy and scientific treatment, the financial condition of the department, both present and prospective, would have been very much better than it is, while the benefit to the country at large would have been immense.

127. On plantations the outlay since 1868 has been Rs. 6,42,848, and on fuel reserves Rs. 1,69,531, making a total of Rs. 8,12,379. If these items together with the receipts accruing from such sources, Rs. 3,39,532, be expunged from the accounts of the last fourteen years, a more favorable result is obtained, viz., an average surplus of Rs. 88,579 per annum.

Adverting to the remarks of Government, paragraph 5 of G.O., dated 10th July 1882, No. 722, Revenue Department, touching the several statements which accompanied last year's report, it may be observed that these forms are only what have from time to time been prescribed for use, but endeavours will be made to effect the necessary alterations when submitting the report for 1882-83.

STATEMENT showing the Quantity and Valuation of Timber, &c., felled and removed by Departmental Agency during the Year 1881-82.

Divisions.	TEAKWOOD AND SAPLINGS.						ROSEWOOD AND BLACKWOOD.					
	Outlying in the Forests.		At the Forest Depôts.		At the Sale Depôts.		Outlying in the Forests.		At the Forest Depôts.		At the Sale Depôts.	
	Quantity.	Valuation.	Quantity.	Valuation.	Quantity.	Valuation.	Quantity.	Valuation.	Quantity.	Valuation.	Quantity.	Valuation.
1	2	3	4	5	6	7	8	9	10	11	12	13
	C. FT.	RS.	C. FT.	RS.	C. FT.	RS.	C. FT.	RS.	C. FT.	RS.	C. FT.	RS.
Ganjam	...	...	...	...	...	...	...	...	...	...	...	...
Godávari	...	...	...	..	...	...	...	...	...	...	...	...
Cuddapah	...	...	...	...	...	...	...	...	...	...	...	...
Kurnool	...	...	...	...	...	...	...	...	...	...	...	...
North Arcot ...	...	...	...	...	...	...	...	...	...	...	...	...
South Arcot ...	...	...	472	400	...	...	...	...	...	...	...	...
Trichinopoly ...	...	...	...	...	...	...	...	...	...	...	...	...
Madura	...	...	...	...	...	..	...	...	...	...	...	...
Tinnevelly... ...	...	...	...	...	10,545	1,408	...	...	...	...	...	...
Coimbatore ...	...	...	...	...	45	34	...	...	...	...	...	...
Nílgiris	...	...	...	...	7,749	6,051	...	...	...	..	...	...
Salem	...	...	...	...	...	..	...	...	...	...	...	...
South Canara ...	...	...	...	...	...	...	...	...	...	...	...	...
Wynaad	28,205	17,455	...	...	...	...	884	373	...	...	...	...
Nilambúr	...	...	...	...	12,828 No. 37,569	38,431	...	...	...	...	910	1,024
Pálghat	132 pieces.	62	38	33	...	35	39	17	...	18	...	40
	28,205 and 132 pieces.	17,517	510	433	31,167 No. 37,569	45,959	923	390	...	18	910	1,064

Statement showing the Quantity and Valuation of Timber, &c., felled and removed by Departmental Agency, &c.—(*Continued*).

Divisions.	Redwood.				Other Junglewood.						Firewood and Railway Fuel.	
	Outlying in the Forests.		At the Sale Depôts.		Outlying in the Forests.		At the Forest Depôts.		At the Sale Depôts.		Outlying in the Forests.	
	Quantity.	Valuation.	Quantity.	Valuation.	Quantity.	Valuation.	Quantity.	Valuation.	Quantity.	Valuation.	Quantity.	Valuation.
	14	15	16	17	18	19	20	21	22	23	24	25
	TONS.	RS.	TONS.	RS.	C. FT.	RS.	C FT.	RS.	C. FT.	RS.	T. CWT. LB.	RS.
Ganjam	...	...	...	...	...	...	...	...	15,587	14,593	...	...
Godávari	...	...	...	...	...	...	...	...	...	...	...	...
Cuddapah	...	...	1,000 and 87 posts.	7,332	...	...	...	...	...	...	...	...
Kurnool	...	...	...	...	...	...	...	...	...	...	...	...
North Arcot ...	...	...	825	9,900	...	...	...	...	27	10	...	...
South Arcot ...	...	...	...	...	...	...	2,094	690	1,822	1,267	...	...
Trichinopoly ...	...	...	...	...	...	...	...	...	...	...	...	...
Madura	...	...	...	...	...	...	...	...	...	...	...	...
Tinnevelly	...	...	...	...	...	...	...	...	5,734	3,503	...	...
Coimbatore ...	...	...	...	...	1,345	431	...	...	300	227	...	...
Nilgiris	...	...	...	...	...	...	...	...	...	...	...	...
Salem	...	...	...	...	...	...	...	...	2,504	2,075	...	...
South Canara ...	...	...	...	...	650	98	...	...	...	...	...	...
Wynaad	...	...	...	...	12,684	3,672	...	...	...	...	...	...
Nilambúr	...	...	...	...	...	...	...	...	32,488	6,092	...	...
Pálghat	...	...	...	...	14,164	556	...	64	...	4,015	34 16 48	20
	...	...	1,825 and 87 posts.	17,232	28,843	4,757	2,094	754	58,462	31,782	34 16 48	20

Statement showing the Quantity and Valuation of Timber, &c., felled and removed by Departmental Agency, &c.—(*Continued*).

Divisions.	Firewood and Railway Fuel—(*Continued*).				Bamboos.				Forest Produce.			
	At the Forest Depôts.		At the Sale Depôts.		Outlying in the Forests.		At the Sale Depôts.		At the Forest Depôts.		At the Sale Depôts.	
	Quantity.	Valuation.	Quantity.	Valuation.	Quantity.	Valuation.	Quantity.	Valuation.	Quantity.	Valuation.	Quantity.	Valuation.
	26	27	28	29	30	31	32	33	34	35	36	37
	TONS.	RS.	T. CWT. LB.	RS.	CT. LOADS.	RS.	CT. LOADS.	RS.	T. CWT. LB.	RS.	T. CWT. LB.	RS.
Ganjam	...	...	...	...	...	...	...	...	..	...	..	...
Godávari	...	...	...	...	...	...	...	...	...	...	...	...
Cuddapah	..	...	424 2 16	263	...	...	360	360	...	231	...	...
Kurnool	...	...	...	...	...	...	...	...	...	...	...	...
North Arcot	...	...	5,568 13 24	5,000	...	...	...	...	...	97	...	...
South Arcot	...	...	469 0 0 and 128 poles.	1,663	...	...	...	...	...	...	3 1 68	295
Trichinopoly ...	...	...	1,012 14 79	1,880	...	...	...	...	...	...	...	...
Madura	...	...	114 7 56	337	...	...	...	...	...	273	.	9
Tinnevelly ...	...	...	...	..	...	...	7	84	...	...	11 13 4	1,499
Coimbatore ...	...	...	100 0 0	548	...	...	No. 20	30	...	...	57 7 11	6,121
Nilgiris	...	...	445 10 80	2,869	...	...	...	...	25 8 104	831	...	...
Salem	...	...	...	...	...	...	6	31	...	352	...	...
South Canara ...	...	...	...	...	No. 200	9	...	...	...	810	...	...
Wynaad	...	...	...	...	18,282	274	...	...	...	805	0 4 77	524
Nilambúr	...	...	168 0 0	754	7,728	232	No. 11,690	512	...	...	...	...
Pálghat	...	...	...	...	...	...	625	63	...	...	...	...
	...	...	8,302 8 31 and 128 poles.	13,314	No. 26,210	515	373 C.L. and 12,335 No.	1,080	25 8 104	3,339	972 6 48	8,448

Statement showing the Quantity and Valuation of Timber, &c., sold and supplied during the Year 1881-82—(*Continued*).

Divisions.	Sandalwood.			Red Sander Roots or Posts.			Other Junglewood.					
	At the Sale Depôts.			At the Sale Depôts.			At the Sale Depôts.			Outside the Sale Depôts.		
	Quantity.	Valuation.	Actual Value realized.	Quantity.	Valuation.	Actual Value realized.	Quantity.	Valuation.	Actual Value realized.	Quantity.	Valuation.	Actual Value realized.
	11	12	13	14	15	16	17	18	19	20	21	22
	T. CWT. LB.	Rs.	Rs.	T. CWT. LB.	Rs.	Rs.	C. FT.	Rs.	Rs.	C. FT	Rs.	Rs
Goomsur and Suradá	...	...	...	...	...	...	23,388	21,907	21,907	892	184	189
Godávari	...	...	..	...	...	...	...	..	..	...	...	..
Kurnool	...	...	...	...	...	...	158	36	35	...	...	...
Cuddapah	...	...	...	10 and 93 posts	169	327	...	...	...	...	...	...
North Arcot	12 1 33	1,067	4,039	400	4,800	6,000	...	...	...	...	...	...
South Arcot	0 1 88	27	42	...	...	...	4,255	2,455	2,559	1,566	518	696
Madura	...	...	...	...	...	...	...	...	...	...	..	...
Tinnevelly	..	...	...	...	...	...	5,582	3,079	4,136	...	...	..
Trichinopoly	...	...	...	...	...	...	...	...	...	...	.	..
Salem	3 10 35	1,574	1,390	...	...	...	2,771	2,479	3,110	...	...	...
Coimbatore	73 18 89	14,873	24,748	...	...	...	3,230	1,470	1,951	...	...	...
Nílgiris	11 3 24	5,500	5,500	...	...	...	...	...	...	.	..	...
Wynaad	...	...	...	...	...	...	..	...	...	11,334	3,040	3,913
Pálghat	...	...	...	...	..	...	7,945	2,882	2,889	156	36	36
Nílambúr	...	...	...	...	...	...	14,876	3,719	5,255	...	...	5,849
South Canara	...	...	...	...	...	...	...	...	...	2,282	117	211
Total ...	100 15 45	23,041	35,719	410 and 93 posts.	4,969	6,327	62,205	38,027	41,842	16,230	3,895	10,894

Statement showing the Quantity and Valuation of Timber, &c., sold and supplied during the Year 1881-82—(*Continued*).

Divisions.	Firewood and Railway Fuel.						Bamboos.		
	At the Sale Depôts.			Outside the Sale Depôts.			At the Sale Depôts.		
	Quantity.	Valuation.	Actual Value realized.	Quantity.	Valuation.	Actual Value realized.	Quantity.	Valuation.	Actual Value realized.
	23	24	25	26	27	28	29	30	31
	T. CWT. LB.	RS.	RS	T. CWT. LB.	RS.	RS.	CT. LOADS.	RS.	RS.
Goomsur and Suradá	...	...	...	...	...	..	...	...	...
Godávari	...	...	...	...	...	...	...	...	..
Kurnool	...	...	...	...	...	...	...	...	...
Cuddapah	42 8 24	262	262	...	...	...	360	360	360
North Arcot	5,760 5 40	5,438	13,460	...	...	...	...	...	...
South Arcot	529 0 0	1,663	1,663	...	...	...	...	...	...
Madura	101 4 87	318	446	...	...	...	...	...	...
Tinnevelly	...	...	...	...	...	...	11	140	153
Trichinopoly	...	...	...	...	...	...	...	...	...
Salem	...	...	...	...	...	...	6	31	31
Coimbatore	100 0 0	548	648	...	...	...	20	30	30
Nílgiris	458 0 80	2,950	3,078	...	...	...	...	...	..
Wynaad	...	...	...	...	...	...	...	...	...
Pálghat	...	...	...	34 16 48	159	217	625	63	75
Nilambúr	168 6 8	754	754	...	...	...	No. 11,690	512	512
South Canara	...	...	...	...	...	...	...	...	...
Total ...	7,159 5 15	11,933	20,311	34 16 48	159	217	1,022 No. 11,690	1,136	1,161

Statement showing the Quantity and Valuation of Timber, &c., felled and removed by Departmental Agency, &c.—(*Continued*).

Divisions.	Sandalwood.				Total Valuation.			Grand Total.
	Outlying in the Forests.		At the Sale Depôts.		Outlying in the Forests.	At the Forest Depôts.	At the Sale Depôts.	
	Quantity.	Valuation.	Quantity.	Valuation.				
	38	39	40	41	42	43	44	45
	T. CWT. LB.	RS.	T. CWT. LB.	RS.	RS.	RS.	RS.	RS.
Ganjam	...	...	...	...	...	...	14,593	14,593
Godávari	...	...	...	...	...	...	...	...
Cuddapah	..	...	...	...	...	231	7,955	8,186
Kurnool	...	..	...	...	...	...	...	...
North Arcot	12 8 24	1,097	...	...	1,097	97	14,910	16,104
South Arcot	...	...	4 9 32	1,2 00	...	1,091	4,424	5,515
Trichinopoly	...	...	...	...	...	...	1,880	1,880
Madura	...	...	...	...	...	273	346	619
Tinnevelly	...	...	...	...	...	...	6,494	6,494
Coimbatore	...	...	49 4 17	9,811	431	..	16,771	17,202
Nílgiris	...	...	11 3 24	5,500	...	831	14,420	15,251
Salem	...	...	22 11 88	10,119	...	352	12,225	12,577
South Canara	...	...	...	...	107	810	...	917
Wynaad	...	...	...	...	21,774	805	524	23,103
Nilambúr	...	...	...	...	232	...	46,813	47,045
Pálghat	...	..	...	...	655	115	4,153	4,923
	12 8 24	1,097	87 8 49	26,630	24,296	4,605	1,45,508	1,74,409

STATEMENT showing the Quantity and Valuation of Timber, &c., sold and supplied during the Year 1881-82.

Divisions	TEAKWOOD AND SAPLINGS.						EBONY OR BLACKWOOD AND ROSEWOOD.		
	At the Sale Depôts.			Outside the Sale Depôts.			At the Sale Depôts.		
	Quantity.	Valuation.	Actual Value realized.	Quantity.	Valuation.	Actual Value realized.	Quantity.	Valuation.	Actual Value realized.
1	2	3	4	5	6	7	8	9	10
	C. FT.	RS.	RS.	C. FT.	RS.	RS.	C. FT.	RS.	RS
Goomsur and Suradá	...	...	...	...	...	...	...	...	...
Godávari	...	..	...	...	...	...	...	...	...
Kurnool	343	343	440	...	...	...	...	...	...
Cuddapah	...	...	...	...	...	...	...	...	...
North Arcot	...	...	...	...	...	...	...	...	...
South Arcot	88	83	80	384	326	432	..	...	...
Madura	...	...	...	...	...	...	...	...	...
Tinnevelly	11,109	1,530	3,501	...	...	...	...	.	...
Trichinopoly	...	...	..	...	...	...	...	...	...
Salem	...	...	...	...	...	...	...	...	...
Coimbatore	7,078	9,195	8,862	...	...	...	3,170	2,250	3,561
Nilgiris	7,697	11,746	12,481	5,513	4,191	4,373	...	...	...
Wynaad	137	118	184	8,520	4,915	5,386	...	...	...
Pálghat	139	139	187	7	64	104	14	14	14
Nilambúr	10,625 / No. 42,702	30,825	36,186	...	...	...	1,297	1,297	1,118
South Canara	...	...	...	...	...	...	...	...	...
Total ...	37,216 / No. 42,702	53,979	61,921	14,424	9,496	10,295	4,481	3,561	4,693

Statement showing the Quantity and Valuation of Timber, &c., sold and supplied during the Year 1881-82—(*Continued*).

Divisions.	Bamboos—(*Continued*).			Minor Forest Produce.						Total.	
	Outside the Sale Depôts.			At the Sale Depôts.			Outside the Sale Depôts				
	Quantity.	Valuation.	Actual Value realized.	Quantity.	Valuation.	Actual Value realized.	Quantity.	Valuation.	Actual Value realized.	Valuation.	Actual Value realized.
	32	33	34	35	36	37	38	39	40	41	42
	CT. LOADS.	RS.	RS.	T. CWT. LB.	RS.	RS.	T. CWT. LB.	RS.	RS.	RS.	RS.
Goomsur and Suradá ...	...	...	...	...	...	...	...	...	...	22,091	22,096
Godávari	...	...	...	...	...	...	...	...	...	...	...
Kurnool	...	...	...	...	...	...	...	...	...	379	475
Cuddapah	...	...	...	...	...	...	...	231	231	1,022	1,180
North Arcot	...	...	...	...	...	...	...	97	97	11,402	23,596
South Arcot	...	...	...	3 1 68	343	431	...	...	...	5,415	5,903
Madura	...	...	...	...	9	73	..	273	273	600	792
Tinnevelly	...	...	...	0 15 70	491	787	...	...	...	5,240	8,577
Trichinopoly	...	...	...	...	...	...	...	...	..	...	...
Salem	...	...	...	...	...	...	...	352	352	4,436	4,883
Coimbatore	...	...	...	57 7 11	3,408	6,121	...	...	...	31,774	45,921
Nílgiris	...	...	...	25+6,000 saplings.	831	831	...	...	...	25,217	26,263
Wynaad	No. 18,282	274	274	Cwt. lb. 2 1	36	27	...	805	805	9,188	10,589
Pálghat	...	...	16	...	...	...	...	...	...	3,217	3,538
Nilambúr	No. 7,728	232	282	...	...	...	...	...	...	37,339	49,906
South Canara	200	9	12	...	...	...	...	810	810	936	1,033
Total ...	No. 26,210	515	534	86 6 38	5,118	8,270	...	2,568	2,568	1,58,256	2,04,752

STATEMENT showing the Quantity and Valuation of Timber Stock at the commencement and close of the Year 1881-82.

Divisions.	Teakwood.								Ebony or Blackwood and Rosewood.			
	At the Sale Depôts.				Outside the Sale Depôts.				At the Sale Depôts.			
	At the commencement of the Year.		At the close of the Year.		At the commencement of the Year.		At the close of the Year.		At the commencement of the Year.		At the close of the Year.	
	Quantity.	Valuation.	Quantity.	Valuation.	Quantity.	Valuation.	Quantity.	Valuation.	Quantity.	Valuation.	Quantity.	Valuation.
1	2	3	4	5	6	7	8	9	10	11	12	13
		Rs.		Rs.		Rs.		Rs.		Rs.		Rs.
Goomsur and Suradá	...	...	...	...	...	...	...	...	...	...	...	...
Cuddapah	...	...	...	...	...	...	...	...	...	...	...	...
Kurnool	...	343	...	...	...	...	...	...	...	...	...	...
North Arcot	...	...	...	...	...	...	...	...	...	...	...	...
South Arcot	...	...	...	...	...	...	...	...	...	...	...	...
Trichinopoly	...	...	...	...	...	...	...	...	...	...	...	...
Madura	...	...	...	...	...	..	...	..	...	...	...	...
Tinnevelly	2,097	988	1,533	867	...	...	...	...	...	...	...	...
Coimbatore	70,908	57,219	63,875	48,058	...	...	...	...	...	...	...	...
Nílgiris	...	...	...	...	46,244	31,027	32,960	21,142	23,462	28,100	20,292	25,850
Salem	69	86	69	86	...	...	...	...	...	...	...	..
South Canara	...	...	...	...	...	..	...	...	...	...	...	...
Wynaad...	1,449	1,362	1,312	1,244	25,349	11,291	45,550	23,831	7	8	7	8
Nilambúr	10,625 and 332 saplings	10,825	12,828 No. 17,185	38,432	No. 21,986	20,000	...	...	1,196	1,196	809	923
Pálghat	5	5	...	...	141	106	38	38	...	...	...	...
Total	85,153 and 332 saplings.	70,828	79,617 No. 17,185	88,687	71,734 No. 21,986	62,424	78,548	45,011	24,665	29,304	21,108	26,781

Statement showing the Quantity and Valuation of Timber Stock at the commencement and close of the Year 1881-82—(*Continued*).

Divisions.	Ebony or Blackwood and Rosewood—(*Continued*).				Sandalwood.				Red Sanders Roots and Posts.			
	Outside the Sale Depôts.				At the Sale Depôts.				At the Sale Depôts			
	At the commencement of the Year.		At the close of the Year.		At the commencement of the Year.		At the close of the Year.		At the commencement of the Year.		At the close of the Year.	
	Quantity.	Valuation.	Quantity.	Valuation.	Quantity.	Valuation.	Quantity.	Valuation.	Quantity.	Valuation.	Quantity.	Valuation.
	14	15	16	17	18	19	20	21	22	23	24	25
		Rs.		Rs.	T. CWT. LB.	Rs.	T. CWT. LB.	Rs.		Rs.		Rs.
Goomsur and Suradá	...	...	...	...	...	...	...	...	...	...	...	..
Cuddapah	...	...	...	...	...	...	...	...	...	18	990	7,182
Kurnool	...	...	...	...	...	...	...	...	...	...	...	...
North Arcot	...	...	...	...	10 18 59	979	11 5 37	1,009	...	...	425	5,100
South Arcot	...	...	...	...	0 2 1	32	4 9 57	1,205	...	...	...	...
Trichinopoly	...	...	...	...	...	...	...	...	...	...	...	...
Madura	...	...	...	...	...	...	...	...	...	...	...	...
Tinnevelly...	...	...	...	...	25 14 7	6,471	0 19 97	1,409	...	...	..	...
Coimbatore	...	...	...	...	...	...	...	...	...	...	...	...
Nílgiris	200	75	200	75	...	...	...	..	...	...	...	...
Salem	...	...	...	...	3 12 61	1,625	22 14 1	10,170	...	...	...	. .
South Canara	...	...	.	..	...	...	...	...	...	...	...	...
Wynaad	...	...	884	373	...	...	...	...	. .	...	...	...
Nilambúr	...	...	...	...	...	...	...	..	...	. .	...	.
Pálghat	43	7	68	68	...	...	...	...	...	...	.	...
Total ...	243	82	1,152	516	40 7 16	9,107	39 8 80	13,793	...	18	1,415	12,282

Statement showing the Quantity and Valuation of Timber Stock at the commencement and close of the Year 1881-82—(*Continued*).

Divisions.	Other Junglewood.								Bamboos.			
	At the Sale Depôts.				Outside the Sale Depôts.				At the Sale Depôts.			
	At the commencement of the Year.		At the close of the Year.		At the commencement of the Year.		At the close of the Year.		At the commencement of the Year.		At the close of the Year.	
	Quantity.	Valuation	Quantity.	Valuation.	Quantity.	Valuation.	Quantity.	Valuation.	Quantity.	Valuation.	Quantity.	Valuation.
	26	27	28	29	30	31	32	33	34	35	36	37
		Rs.		Rs.		Rs.		Rs.		Rs.		Rs.
Goomsur and Suradá ...	12,907	8,038	5,116	724	891	184	...	...	...	...	...	...
Cuddapah	...	...	..	...	...	...	...	...	...	..	...	...
Kurnool	12,167	64	245	28	...	...	...	...	...		...	...
North Arcot	...	...	..	...	...	...	...	...	...	...	...	...
South Arcot	1,679	907	75	41	826	298	429	134	...	...	...	...
Trichinopoly	...	...	...	...	...	...	...	...	...	...	...	...
Madura	...	...	...	...	...	...	...	...	...	...	...	...
Tinnevelly	6,784	4,403	6,936	4,836	...	...		...	...	...	...	...
Coimbatore	8,055	3,818	5,125	2,575	...	...	1,345	431	7	91	3	34
Nílgiris	752	872	3,147	405	500	94	500	94	..	...	...	...
Salem.	...	...	485	468	...	...	...	...	...	...	...	...
South Canara	...	...	...	...	1,633	19	...	...	...	...	...	...
Wynaad	1,505	915	1,505	915	1,735	495	4,085	1,127	...	...	...	...
Nilambúr	14,876	3,719	32,488	1,691	..	...	...	.	...	...	...	...
Pálghat	1,572	530	3,921	887	4,875	1,620	8,589	2,981	...	...	...	...
Total ...	60,297	23,266	59,043	16,960	10,460	2,710	14,948	4,767	7	91	3	34

Statement showing the Quantity and Valuation of Timber Stock at the commencement and close of the year 1881-82—(*Continued*).

Divisions.	Railway Fuel or Firewood.				Forest Produce.				Total.			
	At the Sale Depôts.				At the Sale Depôts.				At the Sale Depôts.		Outside the Sale Depôts.	
	At the commencement of the year.		At the close of the year.		At the commencement of the year.		At the close of the year		Valuation.		Valuation.	
	Quantity.	Valuation.	Quantity.	Valuation.	Quantity.	Valuation.	Quantity.	Valuation.	At the commencement of the year.	At the close of the year.	At the commencement of the year	At the close of the year.
	38	39	40	41	42	43	44	45	46	47	48	49
	T. CWT. LB.	RS.		RS.	T. CWT. LB.	RS.	T. CWT. LB	RS.	RS.	RS	RS.	RS.
Goomsur and Suradá.	...	...	...	...	...	..	...	..	8,038	724	184	..
Cuddapah	...	...	...	...	...	...	...	...	18	7,182	...	...
Kurnool	...	...	...	...	6 7 106	309	6 7 106	309	716	337	...	...
North Arcot ...	191 10 40	428	..	.	...	..	...	...	1,407	6,109	...	...
South Arcot ...	...	...	...	...	1 1 23	54	0 0 25	11	993	1,257	298	134
Trichinopoly ...	...	...	1,012	1,880	...	...	...	...	...	1,880	...	..
Madura	7 10 0 52 pieces.	33	20	52	...	...	...	..	33	52	...	...
Tinnevelly ...	...	...	...	...	17 15 8	898	28 8 96	1,907	6,380	7,634	...	...
Coimbatore ...	...	...	...	...	...	...	...	2,713	95,608	80,605	...	431
Nilgiris	75 8 104	486	...	...	...	...	...	...	486	405	31,196	21,311
Salem	...	...	...	...	...	...	...	...	2,583	10,724	...	.
South Canara ...	...	...	...	...	...	...	..	..	..	..	19	...
Wynaad	...	...	...	...	...	111	0 3 109	599	2,396	2,766	11,786	25,331
Nilambúr	...	...	...	...	...	...	...	...	15,740	45,446	20,000	..
Pálghat	..	...	...	...	...	...	...	...	535	867	1,733	3,087
Total ...	274 9 32 52 pieces.	947	1,032	1,932	25 14 25	1,372	35 1 0	5,539	1,34,933	1,66,008	65,216	50,294

Statement showing the Quantity and Value of Timber and other Produce removed under the License System during the year 1881-82.

Divisions	Ebony or Black-wood		Other Jungle-wood		Firewood.		Engine Fuel		Charcoal.		Bamboos		Forest Produce.		Grazing Fodder Grass.		Total Value.
	Quantity.	Value	Quantity.	Value.	Quantity	Value	Quantity.	Value	Quantity.	Value.	Quantity.	Value	Quantity.	Value	Quantity.	Value.	
	C. FEET	RS.	C. FEET	RS	TONS	RS	TONS.	RS	TONS	RS	CARTLOADS	RS.	TONS.	RS.		RS.	RS
Goomsur and Suradá	..	..	330,800	38,885	3,578	926	.	..	11	15	96	30	..	23	..	..	39,879
Godávari	..	..	..	10,453	.	..	..	.	.	148	..	10	..	1,019	..	..	11,630
Cuddapah	..	..	115,699	11,243	4,833	4,107	10,587	25.956	198	364	1,696	2,232	230	993	..	4	44,899
Kurnool	..	..	199,870	20,120	596	447	..	..	287	861	12,894	4,029	413	946	..	705	27.108
North Arcot ..	..	..	38,650	3,363	1,362	1,136	..	..	460	1,527	8,491	10,499	..	925	..	..	17,450
South Arcot . ..	..	..	20,878	1,135	2,945	3,112	24	54	16	47	1,625	1,420	802	1,216	..	..	6,984
Trichinopoly ..	..	..	267	315	.	..	763	2,858	..	..	912	140	..	44	..	1,814	5,171
Madura	..	..	49,539	5,501	8,284	7,168	..	..	113	407	2,454	2,635	..	4,324	..	..	20,035
Tinnevelly . ..	..	.	32,906	2,149	2,793	3,851	..	..	522	1,763	232	224	..	3,170	..	1,332	12,489
Coimbatore	..	..	32,322	4,334	16,497	13,570	..	..	304	936	14,490	17,044	462	8,860	..	1,583	46,327
Nílgiris	2,650	580	5,880	1,114	2,009	6,012	.	..	40	197	25	106	10	28	..	..	8,037
Salem	..	..	40,512	3,789	110	974	1,943	4,352	259	888	3,218	12,535	466	14,588	..	..	37,126
South Canara ..	..	..	6,823	1,556	5,083	7,100	..	.	12	28	Nos. 25,100 10	376	..	..	..	..	9,064
Wynaad	..	..	..	..	.	..	..	..	..	..	.	..	..	..	..	..	.
Nilambúr	..	..	..	.	.	.	.	..	..	..	..	..	..	..	.	.	
Pálghat	..	..	26,050	1,168	2,143	2,046	..	..	..	..	285	385	..	100	..	..	3,609
	2,650	580	900,196	1,05,125	50,233	50,449	13,317	33,220	2,222	7,181	46,428 Nos. + 25,100	51,665	2,383	36,240	..	5,438	2,89,898

STATEMENT showing the Total Yield of Forests during the year 1881-82.

Divisions.	Teak-wood.	Sandalwood.	Ebony, Blackwood, and Rosewood.		Forest Produce.		Red Sanders	Junglewood.		
	Depart-mentally.	Departmentally	Depart-mentally.	On License.	Departmentally	On License.	Depart-mentally.	Depart-mentally.	On License.	Free.
1	2	3	4	5	6	7	8	9	10	11
	C. FEET.	TONS CWT. LB	C FEET.	C. FEET.	TONS. CWT. LB.	TONS. CWT. LB.	TONS.	C. FEET.	C. FEET.	C. FEET.
Goomsur and Suradá	...	...	...	...	...	...	...	15,587	330,800	...
Godávari	...	...	...	...	...	...	. .	..	...	...
Cuddapah	...	...	. .	...	...	230 7 16	1,000 Posts 87	...	115,699	16,080
Kurnool	...	...	...	...	.	413 0 0	...	...	199,870	...
North Arcot ...	...	12 2 84	...	...	...	...	825	27	38,650	74
South Arcot ...	472	4 9 32	...	...	3 1 68	802 0 0	...	3,916	20,878	225
Trichinopoly ...	...	...	...	. .	...	...	...	...	267	...
Madura	...	...	...	...	...	...	.	...	49,539	13,504
Tinnevelly	10,545	..	...	...	11 13 4	...	...	5,734	32,906	2,625
Coimbatore	45	49 4 17	...	...	57 7 11	462 0 0	...	1,645	32,322	33,320
Nílgiris	7,749	11 3 24	...	2,650	25 8 104	10 1 48	. .	1	5,880	1,450 Trees 270
Salem	...	22 11 88	...	...	...	466 1 48	...	2,504	40,512	1,935
South Canara ...	...	...	...	...	...	...	...	650	6,823	...
Wynaad	28,205	...	884	...	...	...	...	12,684	...	...
Nilambúr	12,828 No. 37,569	...	910	...	0 4 77	...	...	32,488	...	...
Pálghat	38 Pieces 132	...	39	...	...	...	...	14,164	26,050	...
Total ...	59,882 No. 37,569 Pieces 132	99 11 21	1,833	2,650	97 15 40	2,383 10 0	1,825 Posts 87	89,400	900,196	76,213 Trees 270

Statement showing the Total Yield of Forest during the year 1881-82—(*Continued*).

Divisions.	Firewood and Railway Fuel.			Bamboos.			Charcoal.
	Departmentally.	On License	Free.	Departmentally.	On License	Free.	On License.
	12	13	14	15	16	17	18
	TONS. CWT. LB.	TONS. CWT. LB	TONS CWT LB	CART LOADS.	CART LOADS.	CART LOADS.	TONS. CWT LB.
Goomsur and Suradá	...	3,578 0 0	...	...	96	...	10 10 0
Godávari	...	...	...	...	...	...	...
Cuddapah	424 2 16	15,420 0 59	523 4 32	360	1,696	184	198 0 0
Kurnool	...	596 0 0	...	...	12,894	...	287 0 0
North Arcot	5,568 13 24	1,362 0 0	114 10 0	..	8,491	55	460 0 0
South Arcot	469 0 0 Poles 128	2,969 0 0	...	...	1,625	22	15 10 0
Trichinopoly	1,012 14 17	763 0 0		...	912	...	...
Madura	114 7 56	8,284 11 0	237 10 0	...	2,454	6	113 9 22
Tinnevelly	...	2,793 0 0	1 0 0	7	232	...	522 0 0
Coimbatore	100 0 0	16,497 0 0	1,053 10 0	No 20	14,490	602	304 0 0
Nílgiris	445 10 80	2,009 0 0	...	...	25	446	40 0 0
Salem...	...	2,053 0 0	36 10 0	6	3,218	...	259 0 0
South Canara	...	5,083 0 0	...	No 200	No 25,100 C loads 10	...	12 5 60
Wynaad	...	...	...	No 18,282	...	...	...
Nilambúr	168 0 0	...	...	No 19,418	..	...	...
Pálghat	34 16 48	2,143 6 8	...	No. 625	285	...	...
Total ...	8,337 4 17 Poles 128	63,550 17 67	1,966 4 32	373 No. 38,545	46,428 No. 25,100	1,315	2,221 14 82

STATEMENT showing the Revenue of the Forest Department in the Madras Presidency for the official year 1881-82.

Budget Heads.	Goomsur.	Godávari.	Cuddapah.	Kurnool.	North Arcot.	South Arcot.	Trichinopoly.	Madura.	Tinnevelly.	Coimbatore.	Nilgiris.	Salem.	South Canara.	Wynaad.	Nilambúr.	Pálghat.	Total.
	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.
I—																	
(a) Timber	22,096	..	327	475	6,000	3,767	..	..	7,637	14,374	16,854	3,110	211	9,483	48,408	3,230	1,35,972
(b) Firewood and Charcoal ..	..	..	262	..	13,460	1,663	..	446	..	648	3,078	..	..	..	754	217	20,528
(c) Bamboos	..	..	360	..	..	..	..	..	153	30	..	31	12	274	744	91	1,695
(d) Sandawlood	..	..	..	..	4,039	42	..	..	..	24,748	5,500	1,390	..	..	..	..	35,719
(e) Grass and other Minor Produce	..	..	231	..	97	431	..	346	787	6,121	831	352	810	832	..	..	10,838
II—																	
(a) Timber	38,885	10,453	11,243	20,120	3,363	1,135	315	5,501	2,149	4,334	1,694	3,789	1,556	..	..	1,168	1,05,705
(b) Firewood and Charcoal ..	941	148	30,427	1,308	2,663	3,213	2,858	7,575	5,614	14,506	6,209	6,214	7,128	..	..	2,046	90,850
(c) Bamboos	30	10	2,232	4,029	10,499	1,420	140	2,635	224	17,044	106	12,535	376	..	..	385	51,665
(d) Grazing and Fodder Grass.	..	..	4	705	..	..	1,814	..	1,332	1,583	..	..	..	..	..	..	5,438
(e) Other Minor Produce ..	23	1,019	993	946	925	1,216	44	4,324	3,170	8,360	28	14,588	4	..	..	100	36,240
III. Confiscated Drift and Waifwood	295	995	399	1,622	57	162	..	342	137	427	27	301	192	..	..	..	4,956
(a) Fines and Forfeitures ..	..	69	..	..	..	..	..	..	..	10	..	..	..	..	..	500	579
(b) Refunds	..	..	208	..	..	..	..	103	2,873	466	..	151	4	118	..	..	3,923
(c) Other sources	..	..	115	99	..	3	4	1,493	56	432	50	76	..	..	20	..	2,348
Total ..	62,270	12,694	46,801	29,304	41,103	13,052	5,175	22,765	24,132	93,583	34,377	42,537	10,293	10,707	49,926	7,737	5,06,456

STATEMENT showing the Expenditure under A, "Conservancy and Works" for the year 1881-82.

Budget Heads.	Goomsur and Surada.	Godávari.	Cuddapah.	Kurnool.	North Arcot.	South Arcot.	Trichinopoly.	Madura.	Tinnevelly.	Coimbatore.	Nilgiris.	Salem.	South Canara.	Wynaad.	Nilambur.	Pálghat.	Total.
I. Timber and other Produce removed from the Forests by Government Agency—	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
(a) Timber	7,357	..	7,800	2	8,637	1,873	..	..	5,477	5,221	4,751	2,777	38	2,347	8,741	1,993	57,014
(b) Firewood and Charcoal.	..	..	..	..	613	28	1,123	281	..	474	1,810	..	..	..	..	24	4,353
(c) Bamboos	..	..	..	..	..	..	..	..	91	10	..	30	..	143	473	29	776
(d) Sandalwood	..	..	..	..	1,318	300	..	..	..	3,197	3,300	1,736	..	..	..	..	9,851
(e) Grass and other Minor Produce	..	..	9	..	81	281	..	113	2,279	3,442	276	412	10	344	..	..	7,247
II. Timber and other Produce removed from the Forests by Consumers	..	..	918	361	1,311	309	..	1,557	547	4,502	1,118	33	..	..	..	..	10,656
III. Confiscated Drift and Waif-wood	264	457	25	606	..	..	..	47	7	17	..	8	2	..	..	..	1,433
IV. Revenue from Forests not managed by Government ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
V. Rent of leased forests, &c. ..	..	..	..	..	..	..	..	..	..	..	3,500	..	..	..	1,180	..	4,680
VI. Live and Dead Stock—																	
(a) Purchase of Cattle ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
(b) Feed and Keep of Cattle	70	..	..	..	..	..	..	..	..	2,078	10	..	..	1,724	..	..	3,882
(c) Plants, Tools, and Instruments ..	..	..	18	..	48	12	27	..	..	41	20	..	3	23	297	..	489
VII. Communications and Buildings—																	
(a) Roads and Bridges ..	..	..	93	..	900	75	..	..	..	338	1,544	132	..	268	..	39	3,329
(b) Buildings	358	..	133	..	141	50	50	..	41	496	312	473	134	110	53	..	2,351
(c) Other Works	..	..	..	..	..	80	..	82	5	280	..	66	..	..	..	..	513
VIII. Demarcation and Improvement, &c.—																	
(a) Demarcation	..	15	..	..	2,061	30	..	11	..	776	..	203	2,481	81	..	..	5,658
(b) Compensation for land, &c.	..	..	..	..	100	251	..	..	..	6,354	..	..	..	..	..	..	6,705
(c) Survey and Working Plans	..	..	..	..	94	..	..	..	1,488	..	..	83	..	149	..	..	1,814
(d) Plantations	33	..	411	..	3,908	616	1,842	45	..	1,070	3,975	..	68	500	7,976	..	20,444
(e) Protection from Fire ..	824	77	6,815	..	291	78	..	..	..	21	745	334	..	153	809	547	10,694
(f) Other Works	80	..	..	..	34	2,903	878	311	589	329	..	1,011	210	..	1,198	196	7,739
IX. Miscellaneous—																	
(a) Refunds	..	..	..	86	..	87	..	103	1,464	816	..	556	..	217	..	..	3,329
(b) Law Charges	..	..	..	..	..	..	..	..	..	..	..	..	..	49	..	..	49
(c) Other Charges	..	..	..	..	..	135	..	1	136	261	..	5	..	..	..	..	538
Total ..	8,986	549	16,222	1,057	19,537	7,108	3,920	2,551	12,122	29,723	21,361	7,859	2,946	6,048	20,727	2,828	1,63,544

STATEMENT showing the Expenditure under Establishment and Contingencies for the year 1881-82.

Budget Heads	Central Office.	Goomsur and Surada.	Godávari.	Cuddapah	Bellary	Kurnool.	North Arcot.	South Arcot.	Trichinopoly.	Madura.	Tinnevelly.	Coimbatore.	Nilgiris.	Salem.	South Canara.	Wynaad	Nilambúr.	Pálghat.	Total.
	RS.	RS	RS.	RS	RS	RS	RS.	RS.	RS.	RS.	RS.	RS.	RS	RS.	RS.	RS.	RS.	RS.	RS.
I Salaries—																			
(a) Conservator	13,348	..	..	..	..	..	..	..	..	..	..	.	..	..	..	..	.	..	13,348
(b) Superior Officers . ..	9,299	..	2,511	4,200	2,500	5,472	4,200	3,235	..	4,142	4,953	4,996	6,994	4,609	..	4,023	5,800	..	66,934
(c) Subordinate, Forest and Depôt Establishments..	..	1,884	1,227	5,774	..	4,482	3,341	2,040	360	4,411	4,503	12,073	2,918	9,202	3,265	2,859	2,553	1,140	62,032
(d) Office Establishments ..	11,145	408	367	1,342	126	1,160	896	1,278	540	1,022	1,414	2,783	978	1,787	1,188	1,893	1,331	252	29,910
(e) Deputation and Special Allowance	1,310	..	460	29	..	..	..	650	..	..	950	..	..	150	.	500	290	..	4,339
II. Travelling Allowance—																			
(a) Conservator . ..	3,615	..	..	..	.	..	..	..	..	..	..	..	..	..	..	..	..	..	3,615
(b) Superior Officers ..	2,777	..	1,681	1,877	1,522	1,879	2,055	2,357	26	1,854	2,068	2,092	1,800	1,929	..	1,800	1,684	..	27,401
(c) Subordinate, Forest and Depôt Establishments..	..	468	20	700	..	721	808	290	174	460	490	2,154	300	1,031	1,197	180	213	180	9,386
(d) Office Establishments .	937	29	..	64	..	..	82	105	95	43	264	124	..	51	233	..	12	16	2,055
III. Contingencies—																			
(a) Stationery	.	..	..	10	..	11	13	2	..	..	12	6	..	19	..	3	8	..	84
(b) Carriage of Tents and Records	158	..	..	33	..	15	12	89	8	..	48	133	..	14	134	..	..	..	644
(c) Rents, Rates and Taxes..	360	..	5	.	..	36	24	40	..	..	..	..	360	..	..	..	..	..	825
(d) Pay of Police Guards ..	.	..	..	.	..	..	..	..	..	..	..	..	..	..	..	..	..	.	..
(e) Official Postage	352	20	35	100	8	80	100	151	88	200	195	286	30	142	98	29	45	9	1,968
(f) Sundries	2,561	13	121	66	15	63	38	21	59	36	67	392	99	102	10	92	43	9	3,807
Total of B. Establishments .	45,862	2,822	6,427	14,195	4,171	13,918	11,569	10,258	1,350	12,168	14,964	25,039	13,479	19,036	6,125	11,379	11,979	1,606	2,26,348
Total of A, Conservancy and Works	..	8,986	549	16,222	.	1,057	19,537	7,108	3,920	2,551	12,122	29,723	21,361	7,859	2,946	6,048	20,727	2,828	1,63,544
Grand Total	45,862	11,808	6,976	30,417	4,171	14,976	31,106	17,366	5,270	14,719	27,086	54,762	34,840	26,895	9,071	17,427	32,706	4,434	3,89,892

FREE Pass Statement.

Divisions.	Timber		Firewood.		Bamboos	
	Building purposes	Agricultural purposes.	Agricultural and Domestic use and for the manufacture of Jaggery.	Burning Corpse and erecting Cadoo-shed, &c	Building purposes.	Agricultural purposes
	Quantity.	Quantity.	Quantity.	Quantity.	Quantity.	Quantity
	C FT.	C. FT.	TONS CWT. LB.	TONS CWT. LB.	C LOADS.	C LOADS
Goomsur and Suradá	..	..	..	..	..	..
Godávari	..	..	..	..	..	..
Cuddapah	14,700	1,380	523 4 32	..	176	8
Kurnool	..	..	..	..	..	..
North Arcot	74½	..	..	..	55½	
South Arcot	..	225	114 10 0	..	..	21½
Trichinopoly	..	..	..	..	..	..
Madura	9,656	3,947	237 10 0	..	6	..
Tinnevelly	..	2,625	1 0 0	..	..	..
Coimbatore	351	32,969	1,051 0 0	1 15 80	15½	586
Nílgiris	270 trees and 632	818	..	..	..	..
Salem	7,744	1,191	..	36 10 0	430½	16
South Canara	..	..	..	..	..	..
Wynaad	..	..	..	..	..	..
Nilambur	..	..	..	..	..	
Pálghat	..	..	..	..	..	
Total ..	33,057 and 270 trees	43,155	1,927 4 32	38 5 80	683½	631½

RESOLUTION—dated 5th October 1882, No. 2437.

The Board submit to Government the Conservator's Annual Report on the Administration of Forests in this Presidency for the year 1881-82.

2. The number of days spent by the various officers of the department in inspection work is satisfactory.

3. RESERVED FORESTS.—Up to the close of the year under report 1182·13 square miles of forest had been reserved in the Presidency. The difficulties complained of in the Godávari District need not at present receive more than a passing notice. If the Forest Act becomes law, these difficulties will cease to exist. The Cuddapah Reserved Forests are favorably reported on. Conservancy is generally backward in Bellary, but the subject is receiving careful attention. In Trichinopoly little was done. In North Arcot it was agreed that the numerous selections of lands for reserves must stand over till the passing of the new Act. The tracts selected by the Committee in Madura are now treated as reserved, but are not yet demarcated. Much remains to be done in this district, but, as in North Arcot, the introduction of the Forest Act must be awaited. Work in Tinnevelly was well commenced, but at the wish of the Inspector-General was suspended, pending the full consideration of certain proposals. Considerable activity was displayed in Coimbatore with satisfactory results. Much injury has been done to forests in the Nílgiris, but energetic measures have been adopted for checking the evils complained of. The demarcation of certain reserves in Malabar was finished, but on a dispute arising regarding the demarcation, judgment was given in a Civil Court adverse to the Forest Department. It is to be hoped that this is an isolated case. Considerable progress was made during the year in the selection of reserves in the Salem District, but the inquiries are not yet concluded. The reserves in South Canara are said to promise well.

4. FELLING AND SALE.—The value of timber felled in the year under report was larger than that of the previous year, but the sales fell off, as will be seen from the following statement;—

	Value.	
	1880-81.	1881-82.
	Rs	Rs.
Timber felled... ...	1,42,032	1,74,409
Timber sold	2,46,134	2,04,752

Increased demand caused the increase in felling. The causes of the falling off in the sales are explained in paragraph 32 of the Conservator's report.

5. Stock.—The amount of timber cut appears to have been fairly proportioned to requirements, the year opening with stock valued at Rs. 2,00,149, and closing with a balance valued at Rs. 2,16,302, while the value of timber felled during the year was Rs. 1,74,409.

6. Fuel Reserves.—The total area under these reserves in the year under report was 160,259 acres, with an area of 60,475 acres fully stocked. There is a slight increase in the former owing to slight additions, and a falling off in the latter owing to large fellings in North Arcot. In consequence of this last the total receipts of the year have risen from Rs. 18,259 to Rs. 23,504. The total expenditure now amounts to Rs. 1,71,796 against total receipts Rs. 99,887. The operations in the various districts are detailed in paragraphs 38 to 45 of the report.

7. Plantations.—The area under plantations has increased from 8,820 acres in 1880-81 to 8,884 acres in 1881-82. The following table shows the changes in receipts and expenditure:—

	Receipts.		Expenditure.	
	In the Year.	Up to the end of the Year.	In the Year.	Up to the end of the Year.
	Rs.	Rs.	Rs.	Rs.
1880-81	38,767	3,20,308	31,870	7,18,728
1881-82	38,255	3,58,563	33,531	7,52,259

The variation is slight and calls for no remark. The growth of Red Sanders is reported to be very promising, but the other experiments cannot be as yet considered very successful except in Trichinopoly and Malabar. Paragraphs 50 to 60 of the report contain details of district operations.

8. The receipts from seigniorage on the license and voucher system amounted to Rs. 2,89,898 against Rs. 2,32,068 of the previous year. The steady growth of receipts is interesting to notice. In the previous year, the increase over the receipts of 1879-80 was Rs. 58,043, while in 1881-82, the receipts were again further swelled by the sum of Rs. 57,830. The Conservator's remarks on the working of the system in the different districts are contained in his paragraphs 68 to 74. The Board trust that the Collector of the Godávari will be able to remove some of the difficulties that are complained of in his district.

9. Yield of Forests.—The Board regret to notice that the wishes of Government as expressed in their review of the previous year's report, paragraph 5, in which a clearer statement was requested as to the yield of the forests, has not received sufficient attention. The statement which accompanies the present report is in the same form as before, while the report itself contains a similar abstract to that of 1880-81, and the Conservator confesses himself unable to offer any reliable remarks on the variations. Government having expressly stated that they "looked for improvement" in the report for 1881-82, the subject should have received special attention.

10. Financial Results.—Following the plan adopted by Government in their review of the previous year's report, the Board append an abstract of six years' receipts and charges:—

Year.	Receipts.	Charges.	Surplus.
	Rs.	Rs.	Rs.
1875-76	4,26,359	4,30,083	— 3,724
1876-77	4,15,312	4,13,970	+ 1,342
1877-78	4,04,164	3,82,493	+ 21,671
1878-79	3,83,878	3,43,789	+ 40,089
1879-80	3,83,224	3,81,228	+ 1,996
1880-81	4,86,715	3,51,999	+ 1,34,716
Total ...	24,99,652	23,03,562	+ 1,96,090
Average ...	4,16,609	3,83,927	+ 32,681
1881-82	5,06,456	3,89,892	+ 1,16,564

The result is extremely satisfactory. The Conservator adds a table incorporating the increase or decrease in value of stock with actual money results, which raises the net surplus of the year to Rs. 1,32,717 by adding to the financial surplus the increase of Rs. 16,153 in value of stock.

11. The Conservator adds a table drawn up as requested in Board's Proceedings, No. 2911, dated 22nd November 1881, which shows the establishment charges apportioned on the several works. This gives a total of charges of Rs. 2,26,348 on establishment against Rs. 1,63,544 on conservancy and works. The Conservator is, however, not quite certain that his figures have been accurately calculated. As a test therefore of the relative merit of different systems the results of this first attempt must not be depended on, but the Board are satisfied that hereafter something may be learned from these calculations if they are carried out with increased care, and while acknowledging the difficulties in the way, they request the Conservator to continue in future reports his attempts to arrive at reliable apportionments.

12. The rapid growth of the mahogany tree, first imported in 1873, augurs well for future experiments in the introduction of this valuable timber. The experiment promises so well that the Board would like to see it extended, and recommend that arrangements be made for a yearly importation of fresh seed. As regards the caterpillar that is reported to have lately attacked the tree, the Board consider it very unlikely that the ova of the insect were imported along with the seed. The insect is no doubt indigenous, but specimens should be secured and sent to the Curator of the Central Museum for identification. The *Ceara* rubber trees continue to give satisfaction. *Castilloa elastica* and *Hevia brazilliensis* are not so promising.

13. The retirement of Colonel Beddome and the visit of Dr. Brandis may be regarded as the most noteworthy events of the year in connexion with the *personnel* of the Forest Department.

14. Major Walker gives an interesting *résumé* of the work of the Department since its organization in 1856.

(True Copies and Extract.)

(Signed) R. SEWELL,
Acting Sub-Secretary.

(True Copy.)

(Signed) S. SRINIVASA RAGHAVAIYANGAR,
First Assistant.

To the Secretary to Government, Revenue Department,
with 28 original enclosures to be returned.
„ Conservator of Forests.

Copy to all Collectors.
„ to the Inspector-General of Forests.
„ „ Superintendent, Government Farms.
„ „ „ Government Museum.

READ—also the following Proceedings of the Board of Revenue, dated 11th November 1882, No. 2741 :—

Read—the following letter from Major J. CAMPBELL WALKER, Conservator of Forests, to the Secretary to Government, Revenue Department (through the Board of Revenue), dated Madras, 2nd November 1882, No. 1379-C :—

Adverting to paragraph 6 of G.O., dated 10th July 1882, No. 722, reviewing the Forest Administration Report for 1880-81, I have the honor to forward a statement distinguishing the areas of demarcated and undemarcated reserves in case Government may think it worth insertion as a supplement to the report recently submitted for 1881-82.

2. When compiling the report it was supposed that, under the circumstances explained in the concluding remarks of Dr. Brandis' note published with G.O., dated 28th April 1882, No. 433, Revenue Department, information of this nature would not be of much interest, and the table in the body of that report therefore contains only the total area of reserved forests.

3. The areas now given are in reality merely a revision of those relating to the 1st April 1881 as no addition has been recorded for 1881-82, because though demarcation has progressed during the year in Salem, Tinnevelly and Coimbatore, the tracts demarcated have either not been surveyed or only partially so.

4. In Tinnevelly operations were suspended by desire of the Inspector-General to enable him to offer certain suggestions for future guidance.

ENCLOSURE.

A Statement showing the Area of Demarcated and Undemarcated Reserves up to 1st April 1882.

Divisions.	Demarcated Area, Square Miles.	Undemarcated Area, Square Miles.	Total Square Miles.	Orders by Government and the Board of Revenue.	Remarks.
Godávari	68	..	68	G.O., No. 792, dated 10th July 1880. ,, ,, 1107, ,, 8th Sept. ,,	
Kistna	..	..	..	.....	
Cuddapah	62·87	114 15	177·02	,, ,, 1974, dated 13th June 1877. ,, ,, 672, ,, 7th May 1878. ,, ,, 1832, ,, 29th Nov. 1881. Rev. Board No. 7015, ,, 8th Dec 1870.	
Kurnool	..	..	..	.....	
North Arcot ..	22·47	..	22·47	G O., No. 971, ,, 1st June 1871. ,, ,, 820, ,, 9th April 1879. ,, ,, 1798, ,, 30th Aug. ,,	
South Arcot ..	67·05	82·56	149·61	,, ,, 4, ,, 4th April 1874. ,, ,, 1346, ,, 19th Oct. ,, ,, ,, 1189, ,, 29th July 1878. ,, ,, 1023, ,, 20th Aug. 1880. Rev. Board No. 6512, ,, 31st ,, 1869.	
Trichinopoly ..	6·51	..	6·51	G.O., No. 502, ,, 21st Mar. 1871. ,, ,, 1064, ,, 15th June ,,	
Coimbatore ..	65·22	80	145·22	,, ,, 1612, ,, 2nd Aug. 1879.	The number and date of the Order constituting the Teevakudi Block a reserve is not given.
Nílgiris	2	26·24	28·24	,, ,, 2247, ,, 5th Dec. ,, ,, ,, 82, ,, 16th Jan. 1878. ,, ,, 110, ,, 29th ,, 1880.	
Salem	17·81	..	17·81	,, ,, —, ,, 15th ,, 1867. ,, ,, 190, ,, 16th Feb. 1880. ,, ,, 270, ,, 2nd Mar. ,,	The orders constituting the reserves are not given in every instance.
Pálghat	20·70	..	20·70	,, ,, 1445, ,, 18th Oct. 1872. ,, ,, 1261, ,, 3rd ,, 1874.	
Nilambúr	24·31	..	24·31	.....	
Wynaad	..	..	..	.....	Leased and purchased.
South Canara ..	..	..	..	.....	
Nellore	..	..	..	.....	
Madura	..	235·43	235·43	G.O., No. 1681, dated 17th Oct. 1878. ,, ,, 1284 ,, 29th Aug. 1881.	
Tinnevelly ..	..	286·81	286·81	,, ,, 257 ,, 11th Feb. ,,	
Total ..	356 94	825·19	1,182·13	.....	

Submitted to Government with reference to paragraph 6 of G.O., dated 10th July 1882, No. 722.

(True Copies and Extract.)

(Signed) R. SEWELL,
Acting Sub-Secretary.

To the Secretary to Government, Revenue Department.
Copy to the Conservator of Forests.
" " Inspector-General of Forests.

READ—also the following Proceedings of the Board of Revenue, dated 30th November 1882, No. 2952 :—

ABSTRACT.—Submitting to Government letter from the Conservator of Forests stating that paragraph 5 of G O., 10th July 1882, No 722, requires a clearer statement regarding yield of forests in the report for 1882-83 and not for 1881-82.

ORDER—dated 12th January 1883, No. 47, Revenue.

Forest, No. 4.

The report of the Conservator compares favorably with that of the previous year, and the Board's exhaustive review leaves but little for the Government to remark on.

2. The receipts and charges of the year under report were Rs. 5,06,456 and Rs. 3,89,892, respectively, leaving a surplus of Rs. 1,16,564 as against a surplus of Rs. 1,34,716 in the year 1880-81, and an average surplus of Rs. 4,638 in the five years ending with 1879-80. This result is satisfactory.

3. The Government observe that while the removal of Rs. 1,83,577 worth of timber by the department last year was effected at a cost of Rs. 43,100, the removal of timber valued at Rs. 1,35,972 in the year under report cost Rs. 57,014. Similarly while the removal of Sandalwood valued at Rs. 35,719 cost Rs. 9,851 in 1881-82, it cost only Rs. 8,689 in 1880-81 to remove a larger quantity valued at Rs. 38,265. These and other variations of the same character are explained in part by the increase in stock at the end of the year and the fact that the establishment and upkeep expenses do not vary in proportion to the increase or decrease in sales. The amount expended on timber operations during one single year gives no practically useful result. In his next annual report the Conservator should endeavour to give the quantity of timber brought to depôt for two or three years and the amount expended thereon. The figures, as they stand, need re-arrangement or explanation. The investigation proposed by the Conservator in paragraph 80 of his report should be of a searching character.

4. It is probable, as suggested, that the disparity evidenced by the statement of apportionment of fixed establishment charges between the results of the Departmental and the License and Voucher Systems is greater than what really exists. The figures should be well scrutinized and the results noted in the report for 1882-83. The Board's observations on the subject are approved.

5. *Reserved Forests.*—The Conservator submits a statement compiled from detailed information carefully collected for the Inspector-General exhibiting the extent of the reserves hitherto officially recognized as such. The estimated area excluding those tracts for the reservation of which no authoritative sanction can be traced, is given at 1,182 square miles. The areas for each district will, as the work of selection proceeds and as the tracts are formally taken up under the Act, be subject to modification. In this connection Major Walker reports on the operations of Mr. Cherry, the officer entrusted with the duty of selecting reserves in the Salem District during the year under review,

The result is that the Committee have agreed in selecting 35 reserves conveniently distributed and containing 306 square miles, which is accepted as satisfactory. The people concerned have been served with notices of the intended reservations and their claims are being recorded. These will hereafter have to be investigated and disposed of in accordance with the procedure laid down in the Forest Act.

G.O., 29th August 1881, No.

6. With reference to paragraph 10, orders have been passed on the Ganjam reserves.

G.O., 18th August 1882, No. 867.

7. As observed by the Board of Revenue, orders on the reserves mentioned in paragraphs 14 and 15 must await action under the Forest Act. Adverting to paragraph 19, the Conservator should, in communication with the Revenue authorities, take steps for extending the area of Sandalwood reserves in the Coimbatore District.

8. The receipts from Fuel reserves were Rs. 23,504, or Rs. 5,245 in excess of those of last year :—

		ACRES.
Total area reserved		160,259
Equal to fully stocked		60,475
		RS.
Receipts	in the year	23,504
	up to year	76,383
Charges	in the year	6,849
	up to last year	1,64,947

The Conservator should report on what data the elaborate and detailed statement of Fuel reserves is based, and how far Government are justified in accepting it as accurate.

9. The Conservator will pay particular attention to the remarks made by the Board in paragraph 9 of their Proceedings.

10. Paragraph 87 of the report will be referred to the Public Works Department for report as to the delay which has occurred in utilizing the allotment made for Forest Officer's quarters in Kurnool.

11. The interesting details furnished by Mr. Ferguson in his report show that the Mahogany and India Rubber trees are on the whole doing well. The Conservator will adopt the Board's suggestion in view to the identification of the insect which has attacked the Mahogany trees. It is not stated in the report whether any further experiments have been made for testing the tanning properties of wattle bark.

G.O., 10th February 1882, No. 722, para. 16.

12. The Conservator's *résumé* of the work accomplished by the Department since its organization in 1856 has been perused with interest.

(True Extract.)

(Signed) P. P. HUTCHINS,
Ag. Secretary to Government.